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Sept. 2. 1664.

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Sept. 2. 1664.

MEDELA MEDICINÆ.

A PLEA

For the Free Profeſſion, and a Renovation of the Art of

PHYSICK,

Out of the Nobleſt and moſt Authentick Writers.

4°. R. 17. 64

Shewing

- The Publick Advantage of its Liberty.
- The Diſadvantage that comes to the Publick by any ſort of Phyſicians, impoſing upon the Studies and Practiſe of others.
- The Alteration of Diſeaſes from their old State and Condition.
- The Cauſes of that Alteration.
- The Inſufficiency and Uſeleſneſs of meer *Scholaſtick Methods* and *Medicines*, with a neceſſity of new.

Tending to the Reſcue of Mankind from the Tyranny of Diſeaſes; and of Phyſicians themſelves, from the *Pedantiſm* of old *Authors* and preſent *Diſtators*.

The Author, M. N. *Med. Londinenſ.*

Medice, Cura Teipſum.

LONDON, Printed for *Richard Lownds* at the *White Lion* in S. *Pauls* Church-yard, neer the Little North-door. 1665.

182.11

To the Right Noble Lord

MY LORD

Marquis of *Dorcheſter.*

My Lord,

YOUR Lordſhip being look'd on as a Prince among Philoſophers and Phyſicians, therefore it is, that though the Author of this Treatiſe hath no Intereſt in you, he conceives himſelf to have Relation enough to you by his Profeſſion, to venture a fixing of his eye upon you, and to preſent himſelf in this Book before you, as a moſt proper Judg to determine whether he ought to be protected, or no, in this bold Attempt, to open the eyes of our little World touching

the State of Phyſick. It is not my Opinion only, That there is a neceſſity of ſetling it upon better Doctrines, Methods, and Medicines; nor have I ventured to write any thing to that purpoſe, meerly upon account of my own Reaſon (for, ſhould an Angel from Heaven ſpeak to ſome People upon his own word, he would hardly be believed); but others have in their Writings drop'd, here and there many paſſages to the purpoſe; and the Reaſons which I have offer'd, I ſuppoſe your *Lordſhip* will find here to be ſufficiently ſeconded by the moſt Learned men in the World, I having ſaid little but what is expreſſed in their Language, which coſt me a great deal of pains to collect; And I was the more willing ſo to manage the Diſcourſe, becauſe I had

had a mind to get countenance to my Deſign, from the Opinions and Determinations of others more able than my ſelf. Which being ſaid, truly *(my Lord)* I am ſomewhat confident I have done the buſineſs that I aim'd at; and there wants nothing to compleat this Confidence, but the paſſing of your *Lordſhips* Judgment; which living Teſtimony if I obtain, after the many other, both dead and living ones, which I have cited in this Book, I ſhall take the greater pleaſure in the Atchievement: However, I ſhall have content, in regard I have a Thouſand Teſtimonies, a Conſcience well diſcharged in the Work, and a Courage for that Cauſe able to bear the brunt of ten Thouſand Calumnies and Reproaches, if they come, inſtead of Reaſon, from ſuch Phy-

ſicians as are contrary-minded. But, in recompence of ſuch a Reward from ſome, I know I ſhall have grateful Acknowledgments from others of true Learning and Ingenuity, when they come hereafter to know my Name, which at preſent I forbear to prefix at length; not that I am aſhamed of the *Treatiſe*, but to the end that when it is expoſed to publick Cenſure, men may paſs the clearer Judgment, without paſſion or partiality; ſeeing when Authors are known, ſome out of reſpect to the Perſons, others out of envy, are apt to approve, or to condemn.

Your *Lordſhip* will therefore, I hope, excuſe this Anonymous Addreſs; and if you meet with any acute Reflections upon the *Galenick* way, I preſume they are no other than neceſſary for the awakning of ſuch

ſuch as ſilently reſt in an Opinion of its ſufficiency; for certainly, after a ſubduing of it by ſtrength of Reaſon, and ſo many good Authorities, it is but juſt to act a little triumph over ſuch Perſons, who continually calumniate men that are not of their way, and are ſo confident, as to attempt an *Autarchie* in Phyſick, and long for an opportunity to oppreſs and trample upon the nobler ſort of Philoſophers and Phyſicians, and, if it were in their power, utterly to extinguiſh them; when as (to uſe a vulgar *Angliciſm*) they are not worthy to be named the ſame day with them, for true knowledg in the Art.

I ſhall (*my Lord*) ſay little more from my ſelf, but end with the words of a worthy Member of the Colledg of Phyſicians (by name Dr *Bennet*) not long ſince deceaſed, in

in his Epiſtle to the Reader before his *Theatri Tabidorum Veſtibulum*; *Let none ſpurn at me becauſe what I offer is of a new Production; for, I have by certitude of Obſervations, faithfully and ſuccinctly laid open the fallacy of ſome Opinions anciently received, and not taken Precepts upon truſt, only from Authors, for underſtanding the Conſtitution of Nature. Moreover, I have not learn'd to go according to Vulgar Inſtitution, but have made bold to ſtep aſide out of the Common Road, being inclined to contemplate and reverence Nature, rather than her Apes.* And his Book concludes, as I do this Epiſtle to your Lordſhip, thus: *I would to God that Phyſitians would think of refining, correcting, and altering the Method of Phyſick, that it might be more accurately and efficaciouſly fitted to the ſcopes of Curation; in order*

order whereunto, a liberty of thinking and ſpeaking freely being firſt obtained, notwithſtanding the obſtinacy of crabbed and moroſe old Fellows, I ſhall undertake, relying upon Experience, and being inſtructed by her, to publiſh and poſitively aſſert divers things, ſomwhat copiouſly and boldly, according to the nature of my Deſign.

But I ſhould not have been ſo bold here to talk at this rate before you, had not the words been put into my mouth by one whoſe Writing ſpeaks him to have been one of the freeſt and moſt ingenuous of the Doctors. And as to what concerns me, ſeeing I am at preſent concealed from your Lordſhip, let me give you this brief account of my ſelf; That the *Treatiſe* is preſented to you by one that from his Youth hath been converſant

converſant in the Studies of Phyſick, and came young to the practiſe of it in this great City, above twenty years ago; and after ſome years of forbearance, though never from the Study, returned again to Practiſe; and how he hath ſince ſpent his time, in endeavouring to meliorate Medicine, will beſt appear by what follows; which I humbly ſubmit to your Lordſhip, as to one that is raiſed aloft by your own Noble Conceptions, Obſervations, and Knowledg in *Experimental Philoſophy*, above the *Pedantry* of this Profeſſion; and being an able Judg, you will (I dare ſay) be juſt in paſſing Sentence, without affection to the one or the other Party.

London,
Novemb. 26.
1664.

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The *Reader* is intreated to amend this Fault of the Preſs, and excuſe the reſt.

Page 198. read τὸ ἐναντίον.

Medela Medicinæ;

OR,

A Plea for the whole Profession and Professors OF PHYSICK.

CHAP. I.

That it is for the good of Mankind there ſhould be a Liberty allowed in the Profeſſion of Phyſick.

THat the Diſeaſes of this preſent Age are of another nature than they were in former times, is (I ſuppoſe) a matter out of queſtion; but leſt any ſhould queſtion, I will prove it;

and if that be once proved, then it cannot be denied, that we muſt proceed by other definitions of their Nature, and indagations of their Cauſes, and invent other Remedies, and Reaſons and Rules of Curation, than what have been delivered by the Ancients; and not confine our ſelves to their Conceptions, Aphoriſms, and Inventions, more than they did themſelves to the Dictates of thoſe Phyſitians that were elder than they. It was a liberty which *Hippocrates* himſelf took, by ſtrength of Reaſon, to judg and condemn the Opinions and Practiſes of ſuch as went before him, and frame a Body of Phyſick of his own: He may be called the Father of the *Four Elements*, and of the Four Phantſies called *Humours*, which our *Hippocrates* (as ſome call him) Dr *Harvey* * aproves not, and allows but one. The like freedom was uſed by his great Commentator *Galen*, who made it his buſineſs not only to trample and triumph over all other Sects at *Rome* (having the Emperour *Antoninus*, and his Son *Commodus* to Friend) but took a liberty to cenſure alſo the Oracle *Hippocrates*, and the ſucceeding Phyſitians, and, when he pleaſed,

* *De gen. Anim. exercit.* 52.

pleaſed, to caſhire them. In the 6. *De Morb. vulg. Comm.* 2. he ſaith, *All things are to be examined by Reaſon and Experience*, and calls thoſe Phyſitians *Slaves which are ſworn to Authors.* And in his ſecond Book *De Meth. Medendi*, he calls their Learning *tyrannical*, which is impoſed by Maſters and Dictators. And in that Book of his, which he wrote on purpoſe to leave us a Catalogue of his own quarrelſom Works, he reprehends ſuch Phyſitians as pin themſelves on the ſleeve of any one or more Doctors, ſaying, I am of *Praxagoras*; or, I am of *Hippocrates*: but being of a free temper, he explained, amended, altered, and added many things, and ſpoiled moſt, ſparing neither *Hippocrates*, nor *Plato*, nor *Chryſippus*, nor *Ariſtotle*, nor any that were before him: Wherefore it was but reaſon, that the learned *Sanctorius*, after he had ſhewn how foul this man fell upon *Hippocrates*'s *Aphoriſms*, ſhould take the ſame licenſe to ſet down his Errours, (as *Avicenna*, *Averroes*, and many others, have done likewiſe in a plentiful manner): And now, that after ſo many Errours of him and *Hippocrates* have been detected, and that it hath been made ap-

pear by *Veſalius*, and others, that they erred, not only in their Adminiſtrations and Deſcriptions of the Fabrick of humane Bodies, but in the very principles of that Philoſophy, which they ſettled, and others moſt pedantically have inſiſted on ever ſince, and do inſiſt on, as the foundation of Phyſick, and of whole Colledges of the profeſſion in *Europe*; I cannot but with a kind of indignation break out into the language of *Langius*, preſent Publick Profeſſor in the Univerſity of *Lipſick*, who in his Preface before the Book of that learned Jeſuit *Kircherus*, lately publiſhed, *De Peſte*, declares, *How exceedingly it hath troubled him to ſee his Brethren of the Faculty dwell only upon Commentaries* (ſo moſt of them have ſpent their time ſince the days of *Galen*) *and through a proneneſs to ſubſcribe to the dictates of the Ancients, have been ſo ſluggiſh as to acquieſce in them, and according to their rude dogmatical Poſitions, to make enquiry after the Cauſes and Eſſences of Things Natural, and of Diſeaſes, and Medicines, and deliver them over as ſacred to their Diſciples. What is this* (ſaith he) *but to ſtrangle Truth, and extinguiſh the vigour of mens Wits with meer Authorities;*

rities; which ſhould rather be fitted for great Things, and led on to more eminent ſearches into the Secrets of Nature? Let me tell them, as long as they are carried with this vain opinion of Authority, and ſo earneſtly yield up themſelves and their Followers Vaſſals to Authors, doubtleſs they do a great injury even to the Ancients themſelves, ſeeing it never enter'd into the minds of Hippocrates, Galen, Ariſtotle, *or the other old Sages of Natural Science, to conſecrate their Works to Poſterity, with ſuch an intent as to count it neceſſary that men ſhould preſently be content with them only, and reſt wholly therein; but rather, that they ſhould remember to employ their Endeavors to ſearch and proceed further, and produce ſomewhat of their own: For, as our Anceſtors did abundantly labour to add to their own Inventions, with as great exactneſs as might be, to the Inventions of ſuch as went before them, and perform'd their utmoſt, by learned Obſervations, to illuſtrate ſuch things as to them ſeemed difficult and obſcure; ſo it is our duty ſo to reverence the fair Monuments and Inventions of good Authors, and ſo apply our ſelves to the Inventors, as an Inheritance belonging to many; and*

acquit our ſelves in ſuch a manner as good Fathers of Families uſe to do, who ſtudy how to enlarge and encreaſe what they have received, and tranſmit that Inheritance from themſelves to their Poſterity, much augmented, that ſo, I ſay, we may look on thoſe who are gone before us with ſo many illuſtrious examples of their Induſtry, not as our Lords and Maſters, but Leaders, reckoning with Seneca, *That there yet remains much work to be done; and that very much is like to remain always; and that after a thouſand Ages more, men will not want occaſion to make new Diſcoveries and Additions.*

Mens not being perſwaded of this, is the great occaſion of the little progreſs that hath been made in all other Sciences, as well as that of Phyſick; and the incomparable Lord *Bacon*, among the ſeveral Cauſes of the non-advancement of all manner of Sciences, reckons this for one, *An extream Affection to Antiquity.* Truly (as he ſaith) *Antiquity deſerves that men ſhould make a ſtay a while, and ſtand thereupon, and look about to diſcover which is the beſt way; but when the diſcovery is well taken, then not to reſt there, but chearfully to make progreſſion.*

Advance of Learn. li. 1. cap. 5.

Indeed

Indeed, to ſpeak truly, Antiquitas Seculi, Juventus Mundi; *Antiquity of Time is the Youth of the World. Certainly, our Times are the ancient Times, when the World is now ancient; and not thoſe which we count ancient,* ordine retrogrado, *by a computation backward from our own Times; and yet ſo much credit* (as he ſaith) *hath been given to old Authors, as to inveſt them with the power of Dictators, that their words ſhould ſtand, rather than admit them as Conſuls to give Advice.* And this kept Phyſick, till of late years, as well as other Sciences, low, at a ſtay, and very heartleſs, without any notable Growth or Advancement; and upon this account (as the ſame Lord ſaith) *the Liberal Sciences have fared far worſe than the Arts Mechanical, which always have been, and are continually much improved;* whereas in this of Phyſick and Philoſophy, men have formerly thought it wiſdom not to budg an inch from the footing of the firſt Maſters; inſomuch that when *Chymiſtry* firſt came in play, the Profeſſors and Operators were thought to be Mad-men; but afterwards (when they gained ſome ground and entertainment in the World) the *Ariſtotelians* and

Galeniſts, ſeeing that reproach and contempt would not do the work, began to raiſe a fierce perſecution, by ſtirring up Princes and Magiſtrates againſt them, as a pack of *Magicians*, *Mountebanks*, *Rogues*, *Cheats*, *Vagabonds*, and I know not what; and procured Laws and Statutes to be made againſt them as ſuch, till the excellency of the Art it ſelf, and its grand Atchievements, opened the eyes of Governours, and ſtopp'd the mouths of gainſayers; and even the common people came to ſee, that it was the Intereſt of the Collegiate Corporations of Phyſitians, who lived in eaſe and ſplendor, practiſing with old Maxims and Medicines, not to permit a new laborious Sect of Philoſophers, working Knowledg out of the Fire, by their Induſtry and Succeſſes, to bring a reproach upon them for their Idleneſs, and ſuperſtitious devotion to their old heatheniſh Authors; of whom the ſame moſt excellent Lord and Philoſopher ſaith thus in his Preface, *I dare confidently avouch, that the Wiſdom we have extracted chiefly from the Grecians, ſeems to be a Child-hood of Knowledg, and to participate that which is proper to Children, namely, That it is*

apt

apt for Talk, but impotent and immature for Propagation; for, it is of Controverſies rank and fertile, but of Works barren and fruitleſs; the truth of which never ſo ſignally appears, as when two or three of the dogmatical Admirers of that Learning, and of the uſual Medicines, come at any time to meet in a Conſultation; after which, if no good be done by them, it frequently comes to paſs, when all is deſperate, that ſome noble Medicine (lying without the Road of their Method, and a *Pharmacopeia*) which they may pleaſe to call Emperical, through the goodneſs of God performs a Cure; and yet he that adminiſtred it, be he otherwiſe never ſo Learned and Rational, if he be not a Drone of the old *Methodical Hive*, is ſure to be calumniated, and mark'd with a black Coal, though themſelves only have deſerved it.

Now this were a thing to be admired at, but that we find it hath always fared thus with the *Beaux Eſprits*, thoſe brave Spirits in all Ages, who have advanced Learning beyond the brains of Titular Doctors and Philoſophers, and above thoſe antiquated Notions which are the

Idols

Idols of ſuch as are too proud and idle to go to School again to learn new; though I muſt tell them, 'Tis no ſhame for any to be a Learner in the School of Nature, whoſe Myſteries are ſublime, her Treaſures inexhauſtible; and he who will ſtudy, could he live (as *Seneca* ſaith) a thouſand Ages, would even then find matter and occaſion for new Enquiry and Diſcovery: But the miſery is, that other ways have been taken by too many, though of late years they have been ſhamed out of it by the Induſtry of their *Juniors*.

I remember Dr *Hackwel*, in the Preface to his *Apology*, gives an account at large, what ill entertainment new Inventors and Inventions have always found amongſt the preſent Maſters of ſeveral Profeſſions. Should I tell how ill *Paracelſus* was receiv'd, ſome would ſay, 'Twas but what he deſerved, becauſe he hath an ill Name among thoſe that either do not or will not take pains to underſtand him, and have not good nature enough to paſs by his Extravagances; yet one that was Phyſitian to the Emperour, and other Princes of *Germany*, ſtiles him, *Verè celſus Paracelſus*, *Moſt ſublime*

ſublime Paracelſus. And the truth is, he had the honour to open the eyes of mankind in the moſt excellent part of Phyſick; and (ſetting aſide ſome whimſeys) it may be truly ſaid, He did much, and gave ſuch hints of more, that all the World hath been beholden to him ever ſince; And others in after-times, taking example by him, have not only brought rare Medicines to light, but ſhewn the vanity of that Logick and Philoſophy which hath been deliver'd to us by Heathens, and which 'tis a ſhame the Schools of *Chriſtendom* ſhould yet retain, as if they contained Principles conducible to the Attainment of Phyſick, when as that great Chancellor of the Commonwealth of Learning (as a learned French-man calls him) and the profound *Helmont*, and the moſt ingenious *Des Cartes*, have abundantly made manifeſt the inſufficiency of both; and they are fallen now ſo low, that the moſt excellent Sr *Kenelm Digby*, and that noble Philoſopher Mr *Boyle*, and others not ſo tall as they, do not only look over but far beyond them; for, to ſay no more at preſent, the Lord * *Bacon* hath ſhewn of how little uſe that Logick is, and *that the Phyſicks were corrupted*

L. *Bacon*

* In his Nov. Org.

rupted by their being accommodated thereto; which makes that ſearching Wit and learned Head Dr *Henry More* of *Cambridge*, the Ornament of that Univerſity, in a Latine Epiſtolary Diſcourſe of his very newly publiſhed, concerning the *Carteſian* Philoſophy, vouchſafe *Ariſtotle* no greater title than this, *Argutus ille Græculus*, in compariſon of the Philoſophers of latter Times; yet he rode a long while upon the ſhoulders of the blind World, while others have walked afoot (and well they could do ſo too) or have been laid by the heels, or been glad to betake themſelves to their heels from the places where they reſided; Perſecution having been practiſed in all Times on the account of Philoſophy and Phyſick.

Tantundem ſcivisſe Cartehum ſtatuere oportet, in inveſtigandâ Naturæ Cauſis quantum ignoravit Ariſtoteles.

The Noble Deſcent of *Tycho Brahe* might be a protection to him when he firſt broached that Poſition, which pulled the Sphears out of Heaven, and reduced their ſuppoſed ſolid Bodies to be fluid as Air; but *Galilæus* fared worſe, being ſent to Gaol for ſeeing more than others could, by the help of his Optick Tube, loſing (as Dr *More* ſaith) his own Liberty in a Priſon, for giving the Earth liberty

liberty to fetch a Round about the Sun. And as for *Des Cartes*, *Peter Borel*, one of the King of *France*'s Phyſitians, at the end of his *Centuries of Obſervations*, gives this Account, That when that ſublime Philoſopher liv'd at *Utrecht* in *Holland*, the *Ariſtotelian* Profeſſors of that Univerſity became ſo inflamed with envy at him, that their Scholars rais'd the Rabble of the City, at the ſound of a Bell, to drive him out of Town, who was and ever will be thought worthy the admiration of the greateſt Princes and Scholars. But to ſee the fate of things, it hath been this mans luck to triumph even in that Univerſity where ſo much contempt was poured upon him; for, *Henricus Regius*, who now lives there with the honour (which he highly deſerves) of being Publick Profeſſor of Phyſick, in a ſhort time after did him right, by publiſhing a Book of *Natural Philoſophy*, agreeable to the Principles and Deſign of *Des Cartes*; and not only ſo, but in purſuance thereof he hath declared, That if a new Philoſophy be introduced, more ſuitable to the *Phænomena* and Operations of Nature, there ought alſo to be laid new Foundations of

of Phyſick, free from the intanglement of thoſe Diſputes and meer Opinions, which ſerve only to perplex and amaze men, rather than afford any ſolid Inſtruction: This had been attempted by many men before him, men of excellent good parts; *but by their leave* (ſaith he) *they were able to effect little, becauſe of their reaſoning in the old obſcure way of Philoſophy; but now that it hath pleaſed God to illuminate the World with a greater light of Philoſophy, in this happy Age of ours, by clear and eaſie Principles, every where obvious to the Underſtanding, and more accurately fitted for uſe, I have reduced the whole Art of Phyſick to theſe two Points,* viz. *the* Knowledg *and the* Curation of Diſeaſes, *which are the only duties of a Phyſitian; and* * *caſhiered the common Doctrine of* Elements, Temperaments, Parts, Spirits, Humours, Faculties, *and* Function, *which have no Being but in the brains of the vulgar, that ſo I might render all the Myſteries of our Profeſſion, even the moſt abſtruſe and difficult, plain and eaſie.* Thus far he of himſelf; and this he hath (to ſay truth) well performed, by improving the *Carteſian* Principles, in ſuch a manner as hath put to

In his Epiſtle Dedicatory to the Magiſtrates of *Utrecht.*

* This *Helmont* did alſo before him.

ſilence that peeviſh Spirit of Contradiction which was ſo high before.

I might tell you what hard Quarter was given likewiſe to *Van Helmont* at his firſt appearance, being reviled as an Enthuſiaſt and a Mad-man, though I muſt tell you, the *Hypotheſes* by him ſet down to find out the eſſences of Diſeaſes, and proper means to cure them, ſhew him to be one of great reaſon and inſight into things natural; and I, who have taken pains (as pains muſt be taken) to underſtand him, though his Medicines cannot be underſtood, can ſay (by experience) his Doctrine is ſuch as by frequent recourſe to it will enable a man to deſign aright the Cure of Diſeaſes, more than all that hath been ſaid in the World to that purpoſe before; and therefore being lately turned all into Engliſh, it had been better if Dr *Charlton*, who tranſlated ſome parts of him, had taken pains about the whole, that others might have betaken themſelves to the ſtudy of an Author, which ſome, that would be no little men of Learning, are frighted from reading, becauſe of his novelty and difficulty; when as others of high State, and who have given the Age high proof

proof of their Learning, do admire him; witneſs the character given him by *Zwelfer*, Phyſitian to the preſent Emperour, in his moſt learned elaborate Notes on
*Pag. 409. the * *Pharmacopeia Auguſtana*, where he entitles him *Acutiſſimum illum Philoſophum Helmontium*; *That moſt acute Philoſopher Helmont.* And *Oſwald Grembs*, a very learned Phyſitian belonging to the Duke of *Saxony*, who hath endeavour'd to give us an Abridgment of the large Works of that Author, and joyns together both the *Galenick* and *Helmontian* way of curing Diſeaſes, doth notwithſtanding in fine give his vote for *Helmont*, telling us in plain terms, * *His main intent is no other than to perſwade Phyſitians, that the Foundations laid by* Galen *do not correſpond with the practiſe of Phyſick, but that it may be better accommodated by the Foundations of* Helmont. Yet this was the man cryed out on by many wiſe men in the beginning, and now by none but ſuch as are Otherwiſe.

* *Lib. 2. c. 1. ſect. 4. De Morbis Licuk.*

The ſame fate befel alſo our incomparable Dr *Harvey*, when he firſt laid open the *Bloods Circulation*; and he himſelf, in that Treatiſe *De motu Cordis*, makes

makes ſad complaint what ill uſage he had, becauſe in that buſineſs he departed from the ſenſe of all Anatomiſts that went before him: but what would thoſe men have ſaid, had they liv'd to ſee what later Anatomiſts have done? not only departing from the Ancients, but jangling and jarring with each other, touching the uſe of every part and particle of Mans Body, as may be ſeen by the Writings of *Bartholinus*, *Walæus*, the new *Schenkius*, *Rolfinckius*, *Hornius*, *Sylvius de le Boe*, and divers others, too many to reckon up, beſides others of our own Nation; the latter of which, have taken pains to reckon up the differing Opinions, the conſideration whereof hath, through their endleſs variety, given me, and ſome other touchy Heads like mine, occaſion to pry into one point beyond them, *viz.* Whether in the practiſe of Phyſick there need be the hundredth part of this ado about Anatomy; eſpecially ſeeing that when the Body is out of order by Diſeaſes, the Blood and Humours have other vagaries than in the uſual Channels; and * *Fernelius* himſelf ſpake but lightly of Anatomy, and was

* Plentius *in the life of* Fernelius, *tells his mind more at large.*

of opinion, our Brethren might better ſpend their time in making Obſervations on the Sick; to which give me leave to add an exhortation to labour with their own hands in amending, refining, inventing, and compounding of Medicines, that we may be delivered from the bondage and terrour of thoſe many fulſom Compoſitions, borrowed from the Greeks and Arabians, who were Perſons in their Time to be applauded, and of ſuch ingenuity, that were they now living to ſee what improvement the Art hath received of late in a few years, would doubtleſs admire the dotage of thoſe men who live lazing upon the little Knowledg that comes by Tradition, and the Name they have acquired by Time, and timely courting of Women and Nurſes; and be the firſt in throwing moſt of their own old Medicines out of the Diſpenſatory and the Shops.

I could inlarge on this ſubject by innumerable Inſtances, to ſhew how here, and in other Nations, thoſe worthy Perſons who have made it their buſineſs to advance the Profeſſion of Phyſick by new Inventions, and Principles, have from

from time to time been unhandſomly treated, till Time and Experience taught others to approve and admire them. But you will ſay, To what end is all this Diſcourſe about theſe things? 'Tis only to plead for a freedom for ſuch as labour in the ſecrets of Nature, and that no diſcouragement be given to ſuch laborious and ingenious Inquirers, who have too long ſuffered under the imperious Cenſures of ſuch as partly by their Rules, partly by their courſe of Practiſe, would tie men to the old heavy Compounds, and by virtue of Seniority impoſe upon others, and dictate in all Meetings called Conſultations about the Sick; and, like the *Chineſes*, keep all others at a diſtance that are not of their own number or extraction; and ſometimes, like the *Ottoman* Emperors, ſtrangle all their Brethren, or thoſe that are too active to live under their Empire and Juriſdiction. The truth whereof, and the great Inconveniences thence likely to enſue, will the better appear, if I ſet before you two (omitting many other) very remarkable Inſtances, which I ſhall here give, becauſe the perſons concerned

in the Relation were men beyond all exception, and renown'd for Phyſick in the Kingdoms of *England* and *France*, and (like *Auguſtus*) did not only conquer all their Oppoſites, but out-live them, and all their ſlanders: The Perſons were, Sir *Theodore de Mayern*; and his Friend, the famous *Quercetan*: this latter known now by his Learned Works to all the World, and followed; the other not ſo known in print, becauſe his numerous Writings, Memorials, and Conſultations (which have been ſufficiently talked of by ſuch as ſaw them) have not yet been publiſhed; but he was otherwiſe known to purpoſe in both Nations, for his many performances of Cure among the greateſt Princes and Perſons; yet theſe two Men, when they firſt began to ſhew themſelves at *Paris*, and went out of the ordinary Dog-road of Phyſick, felt a grievous ſtorm fall upon them from the then meer Galenick Dons of the Colledg of *Paris*, they having employ'd one of their own number to write a Book in Latine, the Title whereof in Engliſh is, * *An Apology for the Phyſick of* Hippocrates *and* Galen, *againſt* Quercetan, *&c.*

* *Printed at* Paris, *An.* 1603.

tan, *&c.* in whoſe defence *Mayern* writing alſo an *Apology*, they to this Book ſubjoyn'd an *Anſwer to the Libellous Apology* (as they term'd it) *of Turquetus*, (ſo they thought fit to term him, inſtead of *Mayern*); for though he never was aſhamed of his name *Turquet*, yet becauſe (in French) it ſignifies a *little dog*, the witty Champion of the Colledg choſe rather to mention him by that Name, as a ſubject that would better ſerve (as he thought) for matter of quibble and reflection, though his Father was known to be a Gentleman of good Deſcent and Scholarſhip, and the Title *de Mayern* denoted a Lordſhip within the Territory of *Geneva*, which gave name to the Family. That Book was ſet forth by the Colledg, *Anno* 1603. but they reſted not here, but went a ſtep further to no end, ſummoning all the Peers of the Faculty to a Solemn Aſſembly, where their Doctorſhips (*in perpetuum rei ſcandalum*) paſſed Sentence of Damnation upon them both, within the ſpace of four Months, as may be ſeen by the *Cenſures* themſelves, which I have here ſet down, and tranſlated them word for word as they printed them.

Scholæ *Parisiensis* Judicium, de Alchymia *Quercetani.*

Collegium Medicorum in Academiâ Parisiensi legitimè congregatum, audita renunciatione Censorum, quibus demandata erat provincia examinandi librum Josephi Quercetani, de materia, & præstantia veteris Medicinæ; non tantum Quercetani libros spagyricos damnat unanimi consensu, sed etiam Artem ipsam spagyricam: Omnesque Medicos qui ubique gentium & locorum Medicinam exercent hortatur, ut ex Hippocratis & Galeni doctrinâ faciant Medicinam. Quinetiam probibet, nequis ex hoc Medicorum Parisiensium ordine, cum Quercetano, aliisve spagyricis, aut à facultate non probatis consilia Medica ineat: qui secus fecerit, Scholæ emolumentis, & Academiæ privilegiis privabitur, & ex Medicorum regentium albo expungetur. Datum Lutetiæ, in Scholis superioribus, die 9. Septembris, Anno Salutis, 1603.

G. Heron, *Decanus.*

The

THe Colledg of Phyſitians in the Univerſity of Paris *being lawfully congregated, having heard the Report made by the Cenſors, to whom the buſineſs of examining the Book of* Joſeph Quercetan, De Materia & præſtantia veteris Medicinæ, *was committed, do with unanimous conſent condemn, not only the Chymical Books of* Quercetan, *but alſo the Art of Chymiſtry it ſelf; and do exhort all Phyſitians which profeſs Phyſick in any Nations or Places whatſoever, that they will continue to practiſe Phyſick according to the Doctrine of* Hippocrates *and* Galen. *Moreover, they forbid all men that are of this Society of the Phyſitians of* Paris, *that they do not admit of a Conſultation with* Quercetan, *or any other Chymiſts, or any Perſons not approved by Licenſe. Whoſoever ſhall preſume to do contrary, ſhall be deprived of all Advantages of the Colledg, and Priviledges of the Univerſity, and be blotted out of the Regiſter of Regent Phyſitians. Given at* Paris, *in the Upper Schools, the ninth day of* September, Anno Salutis, 1603.

G. Heron, *Dean of the Colledg.*

Concerning *Mayern.*

Collegium Medicorum in Academiâ Pariſienſi legitimè congregatum, audita renuntiatione Cenſorum, quibus demandata erat provincia examinandi Apologiam, ſub nomine Mayernii Turqueti editam, ipſam unanimi conſenſu damnat, tanquam famoſum libellum, mendacibus convitiis & impudentibus calumniis refertum, quæ non niſi ab homine imperito, impudente, temulento, & furioſo proſeiſci potuerunt. Ipſum Turquetum indignum judicat qui uſquam Medicinam faciat, propter temeritatem, impudentiam, & veræ Medicinæ ignorationem. Omnes verò Medicos, qui ubique gentium & locorum Medicinam exercent hortatur, ut ipſum Turquetum, ſimiliaque hominum & opinionum portenta, à ſe ſuiſque finibus arceant, & in Hippocratis & Galeni doctrina conſtanter permaneant. Sed & prohibet ne quis ex hoc Medicorum Pariſienſium ordine cum Turqueto ejuſque ſimilibus Medica conſilia ineat. Qui ſecus fecerit, Scholæ ornamentis, honoribus, emolumentis, & Academiæ privilegiis privabitur, & de Medicorum Regentium

Regentium numero expungetur. Datum Lutetiæ, in Scholis Superioribus, die quinta Decemb. Anno Salutis, 1603.

G. Heron, *Decanus.*

THe Colledg of Phyſitians in the Univerſity of Paris *being lawfully congregated, having heard the Report made by the Cenſors, to whom the buſineſs of examining the* Apology, *publiſhed under the name of* Turquet de Mayern, *was committed; do with unanimous conſent condemn the ſame, as an infamous Libel, ſtuff'd with lying Reproaches, and impudent Calumnies, which could not have proceeded from any but an unlearned, impudent, drunken, mad Fellow: And do judg the ſaid* Turquet *unworthy to practiſe Phyſick in any place, becauſe of his raſhneſs, impudence, and ignorance of true Phyſick: But do exhort all Phyſitians, which practiſe Phyſick in any Nations or places whatſoever, That they will drive the ſaid* Turquet, *and ſuch like Monſters of Men and Opinions, out of their company, and Coaſts; and that they will conſtantly continue in the Doctrine of*

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Hippocrates *and* Galen. *Moreover they forbid all men that are of the Society of the Phyſitians of* Paris, *That they do not admit a Conſultation with* Turquet, *or ſuch like perſons. Whoever ſhall preſume to act contrary, ſhall be degraded and deprived of all honours, emoluments, and priviledges of the Univerſity, and be expunged out of the Regiſter of Regent Phyſitians. Given at* Paris: *in the Upper ſchools, the fifth day of* December, Anno Salutis, 1603.

G. Heron, *Dean of the Colledg.*

It would be to little purpoſe for me to animadvert upon theſe dreadful Bulls, thundred out againſt two perſons of ſo great worth; let it ſerve for their juſtification, That, for all this, the former became famous in *France*, the Kings Phyſitian, and lived to ſee the Colledg repent of their folly, and their Succeſſors become Admirers of thoſe Chymical Books and Remedies which had been ſo raſhly damned. The other became Phyſitian to two Kings of *France*, and two of *England*, and left a Name of great

great honour and wealth behind him. Only this is published, that it may ſerve for a warning to great perſons, and others, that they dote not in any Nation too much upon the Names *Doctor* and *Colledg*, when Publick Good is at ſtake, ſeeing they may be deceived, and be apt to deceive others, if the like idle Spirit of Pride, Intereſt, and Envy, ſhould at any time poſſeſs them, to cry down Perſons and Things, which once in ſeven years themſelves may think fit to follow under-hand, and by ſtealth practiſe; but not be ſeen to do it, for fear of loſing their Credit. It may ſerve likewiſe to evince, That ſeeing men of greateſt Learning and Abilities in the Profeſſion, have judged the old Philoſophy and Phyſick inſufficient, and thereupon receded from it. And whereas in this prying, laborious Age, wherein new diſcoveries of Medicine are every day wrought out of the Fire, and other ways, and more like to be diſcovered, for the benefit of man-kind, afflicted more than ever with monſtrous Diſeaſes (ſuch as the ordinary Remedies of the Shops will not reach); and ſeeing, if

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any Society of men be armed with power to regulate, cenſure, or ſuppreſs whom and what they pleaſe, the moſt ingenious Labourers muſt be left to the mercy of others leſs laborious, and be diſcouraged, or condemned, as others have been before them, if it pleaſe the Infallible Maſters: Therefore doubtleſs any rational man will be of opinion, That it is the concernment of Nations to admit a greater latitude in the Profeſſion and Practiſe of Philoſophy and Phyſick, than the Intereſt (and many times the ignorance) of ſome men of the ſame Profeſſion would be willing to allow: Which was the thing I had a mind to ſhew.

Now let me, in the next place, proceed to manifeſt how great a difference there is betwixt the old ſtate of Diſeaſes, and the new; and this as briefly as I can.

CHAP.

CHAP. II.

That there is a great alteration in the Diſeaſes of this preſent Time, from what they were in the former.

BEcauſe I cannot ſtand to run over every particular Diſeaſe, let it ſuffice to inſtance only in ſome, and leave you to obſerve and reaſon out the reſt in others.

Firſt, 'tis obſervable, That *Agues*, which of all other Diſeaſes give the greateſt baffle to Phyſitians, are exceedingly alter'd. Look upon the definitions and deſcriptions of the Ancients concerning the *Quotidian, Tertian, Quartan, &c.* and ſee how little they ſuit with the Types and Formalities of Agues appearing in this Age, being diſtempers of quite another nature; inſomuch that the old Rules and Remedies of curing them are quite out of doors, ſeldom doing

doing any good, but generally hurt; as for inſtance, Blood-letting, which ſhould we in theſe days adminiſter in all putrid Fevers (as [b] *Galen* directs, and too many follow) we ſhould make mad work with our Patients; eſpecially, if we ſhould admit that to be Goſpel which another Prince of the Profeſſion, by name [c] *Avicen*, gives order for, *viz.* That if the Patient's Urine be *thick and red*, then be ſure to draw Blood; whereas I have obſerved generally in former years, (and particularly this Spring), That Bodies either ill-habited, or Scorbutically inclined, being phlebotomiſed for Agues, have grown very much worſe upon it, and either totally loſt the habit of Body, or been precipitated into another ſort of Ague, of a worſe nature and condition; as for inſtance, from an *Ague-Tertian* to a *Quotidian*, or to a tedious *Quartan*; and yet ſuch Bodies generally have their Urines intenſely thick and red. The truth is, where one Ague falls out now upon the old ſimple account, at leaſt fourty to one do ſtart abroad, which muſt be put upon a new: [d] *Sennertus* is plain in the point, *Plurimæ febres quæ hic*

[b] 11 *Meth.* 15.

[c] *Lib.* 4. *Fen.* 1. *Tr.* 2. *cap.* 39.

[d] *Pract. li.* 3. *part.* 5. *ſect.* 2.

hîc ægros infeſtant, omnes notas Febrium à Græcis & Arabibus deſcriptas non obtinent; *Moſt Agues which infeſt men in this Age, do not agree with the deſcriptions of Agues made by the Greeks and Arabians:* Nay, a man may truly ſay, They are mightily alter'd in the courſe of theſe thirty years laſt paſt; for I remember when I was firſt a Student in this Faculty, they were generally more ſlight, and eaſily curable by old common Remedies; whereas now the moſt of them appear with different and more dangerous Symptoms, which every where confute and defy the whole Herd of vulgar Methodiſts, and their Medicines; yea, more than this, 'tis to be obſerved, That ſometimes a current of three or four years, ſometimes every year, produceth a new ſort of Ague, in the faſhion of a *Tertian*, *Quotidian*, or a *Quartan*, the like whereof was never ſeen before; and *Continual Fevers* alſo, wholly new in all their Symptoms and Circumſtances: In the year 1662. a new ſort of *Quartan* reigned about *London*, and other parts, which had in it all the tokens of Malignity; and from moſt that I my ſelf had

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in cure, I brought away abundance of Worms, and then they presently mended. The like course I took with that *Continual Fever*, which raged in the Country, 1661. and procured plentiful excretions of Worms out of the Bodies of young and old, from Children to persons of seventy years of Age; yea, and what I could hardly believe, when I first read the Observations of *Schenkius*, and others, I that year found very true in a young man and old woman, that Worms will make their own way into the World, through the Bowels and Sides of the persons that breed them, and this without dammage, nothing being used but a little fresh Butter to the Orifice, to make all whole again. He is but a dull Practiser that doth not yearly see Agues and Fevers appearing in new forms; and you may particularly remember what the state of those Diseases was in the Autumnal Quarter of the year 1657. and both the *Spring* and *Fall* of the year 1658. and how wonderfully the Agues and Fevers varied in that short revolution of time; the ground of which marvellous change in the

the World, both in reſpect of Agues, and other Diſeaſes, I may give you a full account of before the concluſion of this Treatiſe, and thereupon let you ſee cauſe to apprehend the uſefulneſs of what I now publiſh to the World, to diſcover thoſe two ſecret Enemies which now run in a blood (more or leſs) through all the generations of Mankind, and have transform'd the whole Scene of Diſeaſes.

I might next inſiſt on ſeveral Diſeaſes of the Female Sex, grown more ſevere than they were in the days of their great Grandames, who, could they now riſe out of their Graves again, would wonder to ſee the miſerable ſtate of poor Women, and the tyranny of thoſe diſtempers which were in their time leſs frequent, and more calm and curable, (for, the ſame Remedies now will do little good towards a Cure); but I forbear particulars, ſeeing, for Modeſties ſake, they are not to be expoſed to every Reader.

That the Diſeaſe called the *French Pox* is extraordinarily varied, appears by the account given of it at its firſt appearance

in the World, compared with what we ſee at this day. If you conſult *Fracaſtorius* and *Benivenius*, you will find, It, in the beginning brake forth in odious Puſtles of ſeveral kinds upon the Privities, the Head, the Face, the Neck, the Breſt, the Arms, and generally the whole Body. Some alſo it disfigured after the rate of a Leproſie; others had a kind of ſcurf, which ſcaling off, diſcover'd the skin underneath to be black or blew: Upon ſome, filthy ichorous ſores were continually running. And beſides all this, they had in the inward parts great tormenting Exulcerations, as in the Mouth, the Throat, the Noſtrils, the urinary and ſpermatick Paſſages, which did eat off the Yard, the Palate, the Lips, the Noſe, in deſpight of all Medicines; ſo that men being affected with the Diſeaſe, their Friends were frighted from looking upon them, and ſhunned them as if they had been viſited with the Peſtilence: Theſe things being conſidered, with the horrid pains that rack'd them, it was rightly termed by a certain Author, *Miſerabile Scortatorum Flagellum; The miſerable Scourge of Whore-maſters.*

ſters. But though it was thus with the Diſeaſe then, yet *Fernelius*, who was born almoſt twenty years before it was diſcovered in *Europe*, and lived to ſeventy two years of Age, ſaw it very much changed in the ſpace of thirty or fourty years, inſomuch that he tells us, in his time it was much altered, * not defacing the Bodies of men with Puſtles, Scurffs, and virulent Ulcers, but tormenting them more with intolerable pains; which though they might be encreaſed by the ignorant and prepoſterous ways of curing then uſed, yet the Diſeaſe it ſelf alſo changed continually, and ſeemed to decline and grow old; *Adeò ut Lues quæ nunc graſſatur, vix illius generis eſſe putetur*; *Inſomuch* (ſaith he) *that the Pox which now reigns, hardly ſeems to be of the ſame kind with the former*: And certainly this was but a ſhort tract of time wherein it received ſo great an alteration; but yet *Fracaſtorius* tells us, it was altered much within twenty years, a leſſer time; and that after this, another mutation was made within ſix years time, the Diſeaſe not raging, as before, in the external parts; from whence

* *De Lue Ven. cap. 2.*

he also was in hope, that it would in time wear it self out of the World, as many other new and monstrous Diseases have done, after they had reigned for a season; but he is mightily deceived; for it yet continues, not in that open hostility it exercised before, but more treacherously and slily insinuates it self into the internal and fundamental parts of the Body, sporting it self under several disguises to afflict the Sons of Men.

Another change likewise hath been made of this Disease, in that where one person gets this Disease by the beastliness of Venery, many hundreds have it by Traduction: For, it is most true which * *Sennertus* saith, *The French Disease is now become Hereditary, being derived from Parents to their Posterity by Generation, and communicated from infected persons to others by kissing, by sucking, by clothes, and the like.* Now all the venereal distempers either of these ways contracted, do extreamly differ from that which is usually gotten by unlawful Contact; for, they usually appear in the form of other Maladies; as is evident not only by report of all the best Authors, but I find it

* *Pract.* li. 6. part. 4. cap. 5.

it in my dayly Practiſe; foraſmuch as abundance of people grow ſickly, and languiſh under the appearance (it may be) of a Conſumption, a Gout, a Dropſie, an Ague, a ſlow Fever, and ſometimes an acute one, Sore-eyes, Greenſickneſs, and indeed of all manner of Diſeaſes, which (when the other ordinary means have been long uſed in vain) have at length been relieved by an orderly uſe of ſuch Anti-venereous Remedies as I have on purpoſe invented, the nature whereof is, to fight againſt Humours both great and ſmall, in old or young, which have been any way touched with the Venereal Tincture, either through their own default, or by ſigillation of thoſe ſeminal Principles, which contribute towards the Being of Mankind in the Act of Generation; which whoſoever takes not into conſideration, in curing the Diſeaſes of this Age (now that the Families of Mankind are tinctured all, more or leſs) will miſs of his aim; and 'tis the main reaſon why ſo few are throughly cured, becauſe few Phyſitians proceed upon an improvement of this Notion, or the inventing of ſuch

Remedies as are of a large reach, and properly conducing thereunto. But of this Subject I ſhall have occaſion to diſcourſe more copiouſly ere long.

In the mean while, let me have leave to inſiſt upon another ſore Evil under the Sun, called the *Scurvy*, which, like the former, is very much alter'd alſo from what it was in former days, and become every jot as Univerſal. I find it is a Diſeaſe of no very long ſtanding, much about the Age of its Couſin-german the *Pox*; for I have read, that when Dr *Martin Dorp*, a Divine of *Lovain*, (one much eſteemed by *Eraſmus*, and Sir *Thomas More*) was afflicted with it, the Phyſitians of that Univerſity were amazed at it, as a new and unknown Diſeaſe; and not knowing what to do towards a Cure, he died under their hands: So that whatever others talk, and would fain reduce it to the old *Stomacace* and *Sceletyrbe*, *i. e.* the *Sore Mouth* and *Sore Legs* of *Pliny*, yet queſtionleſs 'tis but of a late ſtanding in the World; and of late years 'tis grown ſo much another thing, that 'tis in a manner wholly new. The Authors which write of it give this account,

account, That at its first appearance it brake forth in Sores and stinking Ulcers in the Mouth and Legs, looseness and falling out of Teeth, rotting of the Gums, debility of Legs and all the Limbs, Spots of all Colours upon the Skin, acting very much of the same kind of Tyranny with Scabs, Scurffs, and Ulcers of a malignant nature, as the *French Pox* did, which were not to be cured by old usual Remedies, but only by Specificks of a new invention. And as the *Pox* is said to have been discovered at first among the French (which yet *Rondeletius* and other French Writers deny, and would cast the original upon the *Italians*) so this is father'd upon the Nations which lie Northerly, upon the Sea-coast of *Denmark*, *Norway*, *Holland*, and other parts of the *Low-Countries*, where it fell foul upon Seafaring people, who carried it thence, together with Commodities of Trade, to other places, till it crept up into the Continent, especially among such as lived upon ill Diet, like that of Sea-men, as salt Meats, salt Fish, *&c.* and in places watery and fenny and of a foggy Air. In this

Rondeletius, *De Morbo Italico.*

form it raged at first, in such places, and varied but little till it got more ground in the World. It was long ere it got into the warmer Climats of *France*, *Spain*, and *Italy*, in which Countries 'tis * rare to be seen at this day, as may be observed in *Forestus*, *Fonseca*, *Piso*, *Riverius*, and others; yet among them it is increasing, though it is never like to arrive at such a height there, as it is with us, the *Germans*, the *Flemings*, and others nearer the Pole, because their Blood is not so abounding with that *Serosa Colluvies*, which contributes so much towards the production of this Disease among us, and other Northerly people; but that which is most observable in every Country is, That now it but rarely discovers it self in its first garb of Symptoms external, but having gotten dominion inwardly, plays most of its pranks in the more noble parts of the Body; the reason whereof is doubtless this, because now it arises not only from ill Diet, bad Air, contagion by Contact, and the like Causes of corruption, as it did at first, but walks *pari passu* as the *Pox* did, stealing upon Mankind by way of seminal traduction from Father

* *See* Riverius. *Cent. Obs.* 85.

to

to Son, and is become hereditary; ſo that being as it were individually radicated in the very Principles of mens Bodies, it hath conſpired with the Seminalities of the *Pox*, and both have joyn'd their Malignant Forces, to bring a ſtrange *Metamorphoſis* upon the whole Frame of Nature in Mankind, and all the diſeaſes thereto belonging: But of this I ſhall ſay more anon; In the *interim*, let it ſuffice to know, that it rambles about alſo in the habit of other diſtempers; ſo that if an odd-humor'd diſeaſe happen, it concerns the Phyſitian, if he will be dextrous in curing, to exerciſe his ſkill firſt in diſcovering, whether ſuch a diſeaſe have in it a Tincture of the *Pox*, or the *Scurvy*, or both; and then ſecondly, to invent ſuch Remedies to have in readineſs, as may hit either of theſe; but certainly ſuch Remedies are beſt as have a power to ſtrike at both, becauſe (as *Eugalenus* in his Epiſtle to the Prince of *Orange* well obſerves) the Symptoms * of both have ſo near a reſemblance, that few Phyſitians are able to diſtinguiſh betwixt them. And as touching the great alteration of this Diſeaſe from its firſt Nature

* *Cum morbo Gallico paribus Paſſionibus certare videtur, & Symptomatum varietate & ſimilitudine.*

ture and Condition, becauſe I would not be tedious, I ſhall give you only one Teſtimony, and but one Inſtance, the matter being obvious enough of it ſelf. *Hochſtetterus*, an Eminent Phyſitian of *Ausburgh* in *Germany*, in an Epiſtle of his to the Famous *Horſtius*, ſhews how the *Scurvy* altered, as it got footing and time; for, it was ſo much another thing in *High Germany* from what it had been in the *Lower*, and other Parts more *North*, that in his dayes it was *hardly ſo much as a* * *ſhadow of what it had been among thoſe Northern Men*, according to the Deſcription of *Eugalenus*, *Wierus*, *Ronſeus*, *Foreſtus*; yea, and of *Platerus*, who did but tranſcribe out of them what he writes of this Particular, though he deliver it as his own. The Inſtance is but ſhort, and 'tis taken out of the *Bils of Mortality*, which ſhew both the increaſe of the *Scurvy*, and the Malignity of it; for, if you look back on former dayes about 30 years agoe, the number reckoned to dye of that Diſeaſe was but ſmall, and year after year ever ſince it hath encreaſed gradually. In the year 1630. the number was

* *Vix umbram habere noſtrum Scorbutum cum Septentrionalium, intelligo.*

was but 5. In 1631. 7. —— 1632. 9. —— 1636. 25. —— Afterward, in the year 1647. the Account came up to 32. —— In the year 1652. to 43. —— In 1655. to 44. —— In 1656. to 103. —— And in the years ever ſince, they are numbred ſometimes above 70, ſometimes above 80, ſometimes above 90, which ſignifieth, that the Diſeaſe is very much alter'd, being grown to a higher pitch of Malignity and Mortality than in former time. But you are to conceive withall, that the numbers ſo ſet down were onely of ſuch as dyed with manifeſt Tokens of the Scurvy, whereas many hundreds have dyed, and do die every year of Maladies, which radically and in the main are Scorbutick; yet becauſe they are not diſcernible by vulgar Phyſitians, and others, have their lot to be regiſtred under the Names of other Diſeaſes; as will be further made evident before I end this Chapter.

My next Obſervation ſhall be of the *Rickets*, which is a Diſeaſe of a very late Original; for, Mr *John Graunt*, an ingenious Citizen of *London*, who lately wrote an excellent ſhort Treatiſe of

of Obſervations upon the *Weekly Bils of Mortality*, hath obſerved, that we find in them no Mention of *Rickets* till the year 1634: which agrees much with the time of its Original, ſet down by the Learned * Dr *Gliſſon*, who ſaith, it was diſcover'd firſt in the Weſt-parts of *England*, *viz.* in the Counties of *Dorſet*, and *Somerſet*, about 30 years agoe, from whence it ſoon found the way to *London*, from whence it is now ſpread through all parts of *England*. About 20 or 25 years agoe, though it were a grievous diſeaſe, yet not what it is now; It manifeſted it ſelf by an over-growing of the Liver and Spleen, with a crookedneſs of the Legs, a bending in of the Hams, knotting of the Joynts, overgrowth of the Head, a ſinking of the Back-bone, a narrowneſs of the Cheſt, and a general failing of the ſtrength of all the Limbs: but in theſe dayes the Caſe is alter'd; ſometimes ſome of theſe Symptoms appear, but not ſo frequent as formerly, and theſe cannot be reputed the onely Pathognomical Signs of the diſeaſe, becauſe it alſo, as well as the *Pox* and *Scurvy*, marcheth under the

* *De Rachitide.*

the Colours of moſt other diſeaſes; as the *Hydrocephalus intra Cranium*, i. e. *the Water in the Head, difficulty of Teething*; the *Aſthma*, or *difficulty of Breathing*; *the Convulſion, Falling Sickneſs, Conſumption, Hectick Fever, Malignant Fever, Slow Fever, Ague, Dropſie, Kings Evil*, and many more at preſent, and more like to be hereafter, when it ſhall by Tract of time arrive to be hereditary, (as it begins to be already) and joyn force with thoſe Enemies which are the Seminal Products of Venereous and Scorbutick Agents. However, the Diſeaſe is even ſo much changed both in Symptoms and the effects of them, that it doth more and more miſchief, by making greater deſtruction of Infants one year after an other: For, Mr *Graunt* hath ſhewn out of the yearly Bils, that the *Rickets* were never more numerous than now, and they are like to encreaſe; for, in the year 1630. there dyed but 12 of it. In the year 1649. there dyed 190, the next year 260, next after that 329, and ſo forwards, with ſome little ſtarting backward in ſome years, until the year 1660, which produced the greateſt number

number of all, *viz.* 521. which is a great Advance in ſo few years from Number 12. But it is not to be attributed onely to this, that the Diſeaſe is more ſpred abroad, but that it is alſo very much alter'd in its own Nature, to a more deſtructive condition: And being enter'd into a complication already with the *Pox* & the *Scurvy*, (as* Dr *Gliſſon* acknowledgeth) it is in vain to attempt the curing of it with ſuch Remedies and Rules as were uſed thirty or twenty years agoe; becauſe by experience we find they will not reach the Diſeaſe now, which points out to us, that mens brains ought to be working out new Notions and Medicines, as the onely means (with Gods bleſſing) to leſſen the number of thoſe little Innocents which are yearly ſnatch'd away by an untimely death.

* *De Rachitide, cap.* 20.

Next, let us note the *Conſumption*: which in the Bils of Mortality appears to be exceedingly encreaſed, far beyond the proportion of the numbers of Inhabitants which have been added to this great City, the truth whereof will be clear to any that will take pains to compare the Bils ſince the year 1629.

So

So that the extraordinary increaſe of this Malady muſt be attributed alſo to ſome other Cauſe than the increaſe of People; and what can that be, but the change of the Diſeaſe it ſelf to be of another nature than heretofore? For it (for the moſt part) contemns all thoſe large Pectoral Swils, long Syrups, and Electuaries, which were ſuppoſed to work wonders heretofore; the *Phthiſis* is another kind of *Phthiſis*; the *Atrophie* another kind of *Atrophie*; and the *Hectick* another manner of *Hectick*, than was in former dayes; and theſe three Species of a *Conſumption* ſpring generally in this Age from one Root, which is in plain Terms no other but the *Pox* and *Scurvy*, either Hereditary or Adventitious; and thoſe waſtings of the Body to a *Sceleton*, are uually the Effects and Monuments of their Treachery and Tyranny; ſo that he who will now a dayes cure a *Conſumption* muſt ſtrike at the Root, as well as regard the Circumſtances, wherein little good is to be done likewiſe by the ordinary Anti-venereal Means and Courſes, foraſmuch as the uſual Decoctions, Sweatings, *&c.* do rather exaſperate the Diſeaſe than militate againſt it.

From

From the ſame Root likewiſe moſt commonly ſprings that Diſeaſe, which the Vulgar calls a *Stopping of the Stomack*, and it advanceth to a height in the ſame manner, both as to the ſeverity wherewith it handles men and women, and the number which it kills: for, whereas it ſeems to be ſomewhat that is new, becauſe we hear no News of it in our *Bils* till the year 1636. (as Mr *Graunt* reckons) and then but of 6. for that year, it in the year 1655. came to be 145.; and *Anno* 1657. it was raiſed to 277. In 1660. to 314. Which Proportions (ſaith he) exceed the difference of proportion generally ariſing from the encreaſe of Inhabitants, and from the reſort of *Advenæ* to the City.

There is another Diſeaſe which the people term the *Riſing of the Lights*, and I am of his Opinion, that it is the ſame with that they call *Hyſterica Paſſio* or *the Mother*, becauſe it ſeizeth upon women (though men too ſometimes have ſomewhat like it;) and it is evident enough, ſince * Dr *Highmore* (a very induſtrious Learned Man) hath ſufficiently ſhewn, that the *Lungs* are the

* *De Hyſterica paſſione.*

the Part principally affected with that which hitherto hath been called a *Fit of the Mother*. But (ſaith *Graunt*) be theſe *Riſings* what they will, they have much increaſed beyond the general proportion; for in the year 1629. there died but 44. and in the year, 1660, 249. *viz. almoſt ſix times as many*; and whereas the *Rickets*, *the Stoppings*, *and Riſing* (ſo called) have all increaſed together, and in ſome kind of correſpondent Proportions, *it ſeems to me* (ſaith he) *that they depend upon one another*. And I ſay, any man in reaſon will conclude as much; and that they are all three but Pullulations of the *Scurvy*, and its moſt *Scurvy Companion*, if we conſider that all Authors *de Scorbuto* reckon a difficulty of breathing and ſtraitning of the breaſt, to be one of its moſt conſtant Symptoms: And me thinks, what *Sennertus* hath * written doth very much illuſtrate this; for vitious and malignant vapors being raiſed in the lower Belly, eſpecially about the Spleen, in the Stomack, and about the Midriff, and in the Cavity of the *Omentum*, muſt needs, while they continue

* *Pract.* l. 3. part. 5. Sect. 2. c. 4.

there, hinder that free motion of the Midriff which is neceſſary for Reſpiration: In like manner alſo, vitious humors diſtending the Spleen and the Parts adjoyning, may compreſs the Midriff, juſt as perſons hydropick, and women with child, or others that are from any cauſe tun-bellied, are brought to a ſtraitneſs and a difficulty of breathing, while in the mean time the Patients complain not at all of the Breaſt, but point out the place affected under the Midriff about the region of the Stomack, as is evident by the Report of *Eugalenus*, and by every days experience; which is enough to evince, from whence that Malady which they term a *ſtopping of the Stomack*, hath its original *viz.* either from the Scorbutick humors, or vapors.----But *Sennertus* goes on, and gives us ſome light to derive the other, called a *Riſing of the Lights*, from the like playing of Scorbutick malignant vapors up through the Veins and Arteries to the Lungs, and by communication thence to the Heart; and this upon the leaſt commotion or unuſual motion of the mind or body: which being the cauſe alſo

alſo of that Diſtemper which hath been hitherto ſuppoſed to be ſeated in the *Mother*, it is evident enough, that the encreaſe of the *Scurvy* hath made a change alſo of theſe Diſtempers, as it hath done by divers other, and conſequently that the old Remedies reſpecting the *Lungs*, the *Stomack*, and the *Mother*, will do little good in theſe Caſes; and that is the reaſon why ſo many Phyſicians are miſtaken in what they preſcribe, and ſo their Patients loſe both their Coſt and their Labour.

The *Convulſion* alſo is a Diſeaſe now of another nature than formerly; In former years, it ſlew its half hundreds of children, now its many Hundreds in a year; for the Bils tell you that *Anno* 1629. there died but 52. which in 1636. grew to 709. keeping about that ſtay till 1659. though ſometimes riſing to about 1000, as the Eſtimate is made by the ſame ingenious Obſervator: to which I may add, that in the year 1662. they roſe to 1053. and in the year 1663. they fell back, and were only 1011. which great encreaſes cannot be attributed to the encreaſe of children (who are

the parties moſt afflicted with it) becauſe the numbers of New Comers into the world are not advanced in any conſiderable proportion to anſwer ſo great an Increaſe of the Mortality; but it muſt be aſcribed rather to the great Alteration of the Diſeaſe it ſelf, which requires other Notions to proceed by, and other things than old Methods and Means to cure this ſo general a Deſtroyer.

The *Small Pox* and *Meaſels* muſt not be judged by the Bils, as the reſt are, becauſe in ſome years they become *epidemical*, and then the ſlaughter they make fals out (more or leſs) according to the malignity of the particular ſeaſons: but the obſervation to be made of them is when they are *ſporadical*, here and there ſprinkled up and down among the people, in thoſe years which have not any ſuch general Malignity above other years; and then conſider, that as they ſeize but upon a few people, ſo of thoſe few there die many more, and thoſe of them that eſcape do much more hardly eſcape, than in former times, both thoſe Diſeaſes being attended with more dreadful and more dangerous *Symptoms*:

which

which being obvious to every Nurſe, it is needleſs to inſiſt further thereupon than to let you know, that moſt of thoſe which miſcarry, die partly for want of ſome more generous Remedies than the Shops yield; and partly through the inadvertency of Phyſitians, who do not calculate their Preſcriptions to meet with that *Seroſa Colluvies* of Saline, and acid humors, with which the blood of Man-kind (eſpecially in theſe North-parts of the world) is both by propagation and by intemperance of Diet and Luxury exceedingly tainted: the extraordinary active Fermentation and Ebullition whereof, when corrupted, is the Cauſe why *Agues*, *Fevers*, *Small-Pox*, *Meaſels*, and all that hath any thing of Fever in it, proves ſo difficult, or ſo deadly. In the dayes of *Hippocrates* and *Galen*, the *Small-Pox* and *Meaſels* were either altogether unknown, or elſe ſo light and eaſie, that they were never reckoned as particular diſeaſes among the *Grecians*, but look't on as Accidents only, and Critical Eruptions ſupervening putrid and Malignant Fevers: And in after-time we hear no ſuch News of

them, till the *Arabians* began to deſcribe the *Small Pox* as a Diſeaſe diſtinct from others; but then they were very gentle, and thus continued till about 40. years agoe, and leſs. Juſt ſo, *Riverius* tells us, it was in the *Weſt-Indies* till the *Spaniards* arrived there, and then it hapned that a *Black Slave* ſickning of the Small Pox with Peſtilential Symptoms, the maligne and venomous quality thereof being communicated by contagion to others, the Diſtemper began to rage at ſuch a height, that a great part of the *Indians* were deſtroyed by it, though ſo milde before, that it was not reputed worth the Trouble of Phyſick or Phyſicians.

I might ſwell a Diſcourſe up to a Volume, ſhould I inſiſt upon every Diſeaſe; as the *Arthritis Vaga Scorbutica*, which being ſprung up of late years, a Conſequent of the *Scurvy*, is called by the people the *Running Gout*, and grows worſe and worſe continually: I might touch upon its elder Brother the *Gout*, which though not ſo frequently knotty as formerly, hath made an exchange for other Symptoms, and ſeizeth a greater

greater part of Men than heretofore, not ſparing young Men more than old: Alſo the *Rheumatiſm*, which is a quite different thing from that which is deſcribed by *Galen*; ſo likewiſe are moſt of our *Palſies*; to ſay nothing of our common *Coughs*, *Catarrhs*, *Tooth-Ach*, and many other Diſeaſes, which are very much alter'd to the worſe, ſo that the vulgar Remedies avail little againſt them. But I am willing to make an end of this Subject here, that which I had a mind to prove being manifeſt enough, *viz.* That all manner of Diſeaſes are alter'd from their old State, and become almoſt wholly new; foraſmuch as I ſhall in the next Chapter convey more light into the Truth of this Poſition.

CHAP. III.

An Inquiry into the Cauſes of the Alteration of Diſeaſes from their ancient State and Condition.

THis Subject not having been handled to purpoſe by any that I know of, and there being but a ſhort hint given in the former Chapter, that the *French Pox* and the *Scurvy*, by their Invaſions made upon the Univerſality of Mankind, have been the two Main Cauſes of the Alteration; it will be worth the while to make a Scrutiny into the certainty of the thing. It is a matter that I ſuppoſe may, at firſt, ſound harſh in the Ears of ſome people, becauſe of the good opinion they have of Themſelves, their Families and Progenitors; and therefore they will be loth to admit it probable, that any Tincture of ſuch a nature ſhould be gotten into their Blood; but, by that time I have done this Chapter, I believe I ſhall give them ground to apprehend all this may come about, and yet with a *Salvo*

a *Salvo* to their honeſty. The only perſon before me in Print that touched this double Cauſe of the Alteration of Diſeaſes, was one * Doctor *John Wynel*, whoſe deſign in writing was not ſo much to particulariſe the manner how ſo great an Alteration is come about, but he aims only at the deſcription of the *Pox*, a new way of Cure for it, and laſtly how many ſecret wayes it may be communicated or ſpred abroad; which laſt part of his Diſcourſe tends to illuſtrate the truth of what I purpoſe to make out, *viz.* the new Specification or change of nature, which it hath beſtowed upon all other Diſeaſes: Only in his Preface he hath a few Hints concerning this, but very ſhort, the Body of his Diſcourſe bending to another End; but he ſaith withall, that the conſideration of this general miſchief wrought by the *Pox*, was one reaſon which induced him to write of the nature of it, *&c.* I ſhall here tranſcribe the words of his *Preface*, becauſe they make much to my purpoſe. *One occaſion of my Writing* (ſaith he) *was my obſerving the ſtupendious growth and ſpreading of two depopulating Diſeaſes, the* Vene-

* The Title of the Treatiſe, is, *Lues Venerea*, publiſhed *Anno* 1659.

Venereous *and the* Scurvy; *and enquiring thereupon into their effects, in the* yearly Bils of Mortality, *I found them ſo benigne, that it gave me occaſion to admire the myſtery of concealment: I obſerved the* Conſumption *to have ſlain its Thouſands, and the* Venereous Diſeaſe *ſcarce its Hundreds: I concluded thereupon, that* Dolus latet in generalibus, *Conſumption's Back is broad enough to bear ſuch Mocks: I perceived alſo, that the* Scurvy *had ſcarce a conſtant name in the killing Catalogue, though it deſtroy more than any Ten of its Fellows; but the* Dropſie, Fevers *of many kinds, &c. have great numbers dead at their Feet. I concluded thence,* Filiæ devorârunt Matrem. *I obſerved alſo the Mortality and pining of Families, their Generations gaſping, and ſoon run out, one treading on the heels of another, which made me to enquire what ſhould be the occaſion; I accuſed their pampering diet, effeminate education, premature marriage, and indiſcreet covetouſneſs in taking a weak, crooked, or rickety Woman (for her Portion) to be* Materfamilias. *But my thoughts reaſoning againſt the ſufficiency of this enumeration,*

as

as not of ſufficient conſideration, they carried me with greateſt reaſon to contemplate their Diſeaſes; and finding the Venereous Diſeaſe *amongſt them, I was ſtrong in my conjecture, that this Malady, traduced in the Seed of Parents, and Milk of Nurſes, hindring Nature from accompliſhing her intent of perfection, hath brought this calamity upon Families,* Hæret Semini lethalis Arundo.

I obſerved further, that hereby one principal end of Marriage, to propagate a ſtrong, healthy, and numerous poſterity, fit to traduce the being, name, and memory of Parents, to ſuch an eternity as their mortal condition is capable of, was much made void: For, in this wanton painting, patching, perfuming, Iſſuing Age, a man knows not whom or what he takes to himſelf or his Son in Marriage, a Bleſſing, or a Curſe, whereby not only our own Bodies are indanger'd and damnified, but Poſterity primarily, fundamentally corrupted, extirpated, hearts of yoak-fellows alienated, Jealouſie let in, and indeed an uncomfortable life together, becauſe they cannot get aſunder, like two Dogs in a Chain ever ſnarling, and all becauſe the abuſeful deceit

ceit in Marriage manet altâ mente repoſtum.

I obſerved alſo, that all Pretenders to Phyſick gave out a more than ordinary Skill in the Venereous Cure; *yet ſcarce one Patient of Ten went off from them ſound, as by relapſes it too ordinarily appears. I was therefore led to believe, that either the ignorance of the Diſeaſe, or ſhamefacedneſs to diſcover it, made them carry it about them too long; or elſe the ignorance of ſuch as they applyed themſelves to, or the impatience of the Patients to bear a Cure, gave the Diſeaſe this advantage: For, though by Palliation the dolorous Symptoms were baffled, yet the virulent Cauſe was left behind in the dark, deep in their Spirits and Bones, to make future work for the Phyſitian. Hereby their Patients are deceived, who not being able to judge, think better of their Diſcovery than is meet and ſafe, and find by ſad experience, that (the next evoking Seaſon) the Diſeaſe having gotten ſtrength by lying in Trenches, breaks forth more dangerous than it was at its firſt On-ſet. My Scope therefore in publiſhing this Treatiſe, is, to preſent a good office to the world, by entring*

entring the Liſts with this Champion. And ſince this Enemy playes ſmall Game alſo, and is come down ſo low as the Spinſter, I have therefore made him ſpeak plain Engliſh, (not without due reſpect to Modeſty and better Underſtandings) that ordinary Capacities may be able to judge of their own Condition by their own light, and in ſeaſon look out for relief, before captivity, and the further Enervation of their own Bodies. For, though people of both Sexes may be privy to their own perſonal integrity, yet what lurks in their humours from Parents Seed, or Nurſes Milk, they are ignorant of: And, however no preſent Symptoms thereof diſcover it to themſelves, much leſs to others; yet the Fomes of it oft and long lying obſcure, doth traduce a preſent defilement in Generation to Poſterity.

I have read many Authors on this Subject, and found ſatisfaction in none. I perceive, that on this, as on other Subjects, they too much tread in the ſteps of their Anceſtors, and reſt in their Dictates without further Inquiry, ſwelling their Volumes with Tranſcriptions into their own Methods, which ſerve to fill men's Libraries

ries with much paper, and but few Books. Thus far He concerning the *Pox*; whereby it appears, I am not ſingle in my conceptions touching the Alteration that it hath made in other Diſeaſes. He there tells us alſo, that he had the ſame thoughts touching the *Scurvy*, and promiſed to write the like Treatiſe concerning It, which I perceive he hath not yet performed, though doubtleſs very much might have been ſaid to purpoſe by ſo learned and ingenious a Pen. It ſhall be my part therefore to inlarge upon that Hint which he gave in his Preface, touching the Influence which the Seminalities of the *Pox* have by intermixture with other Maladies; and likewiſe to ſupply what he hath yet forborn to write, touching the like influence of the *Scurvy*. In order whereunto, I ſhall reduce my Diſcourſe to ſeveral Heads, and ſhew, that both the *Venereal* and *Scorbutick Miaſma* have gain'd ground in the world five ſeveral Waves, *viz.* 1. By *Carnal Contact*, 2. By *ill Cures*, 3. By accideutal *Contagion*, 4. by Hereditary *Propagation*, 5. By *Lactation*.

1. By

1. By *Carnal Contact.* This being a matter evident by every dayes obſervation, that the Mutual Attrition of Bodies in that Beſtial Act, is the ready common Road of communicating the Pox from one to another, I ſuppoſe it were time loſt to inſiſt upon it, and it may with more purpoſe be ſpent to manifeſt a Truth of much importance to be laid open for the ſecurity of Mankind, which it concerns all men to take notice of; and it is this: That after the committing of that Folly with an unwholſom Perſon, though there appear no Sign nor Symptom of a Diſeaſe for the preſent, yet it may be latent and lurking within the Body, many years, before it make any diſcovery of it ſelf either in its own nature, or in the diſguiſe of other Diſeaſes. This may be proved many ways; for, it is frequently obſerved, that Common Women who have long lived in that wicked courſe of Proſtitution, have many years continued without any manifeſt effect of the Malignity of that Diſeaſe upon their own Bodies, and yet the Diſeaſe lurking within hath inabled them to infect

(it may be) some Hundreds of others. And the like hath been observed of men infecting women, yet those men not privy to the sense or knowledg of any Infection actually resident within themselves, though otherwise they know they have sufficiently deserved it: which one would think should be sad News to all the *Strikers* of both Sexes, to hear that even in this world there can be no security from the punishment of this Sin; 'tis commonly but *Touch and Take*; and if any offend, though but once, they may be surprized by the venom; and if they should perhaps scape free from the Taint, yet 'tis rare; and here lies the misery, they are not sure that they are so. But that you may not wonder how this can come about, that some are made sad examples of the Infection, and others not; and that some that practise wickedness most of their dayes seem sound even to old Age, while upon others, after but one Coition, the Disease breaks out with violence; or why some Sinners seeming sound o themselves, are yet infectious to their Copes-mates; I tell you in the language of

of Dr *Wynel*, it may be aſcribed to many Cauſes.

1. To the various Diſpoſitions of Bodies; for, ſome are more prone to this, or that Diſeaſe, and therefore take it ſooner, becauſe Nature makes leſs reſiſtance: which alſo is the reaſon that they who have any part of their bodies weaker than other, do receive a Diſeaſe ſooner in that part: For example, let a man that hath the *Gout* be venereouſly infected, and he ſhall find it more to prevail and afflict him in his Feet. So on him that hath weak eyes, if this Pocky Diſeaſe ſupervene, his eyes are ſooner and more afflicted than other parts: And the Truth is, the more infirm any perſon is in the Spermatick Veſſels and Members of Generation, the more eaſily the Infection makes its way to the Blood, Humours, Spirits, and Parts of the Body, and the whole Body ſuffers under its Tyranny; but if the Body be ſtrong, then the Venom is kept under in a lurking ſtate, till the vigor of nature decaying either by intemperance, or either by Time, or by the invaſion of ſome other Diſeaſes, it takes thereupon

an opportunity to break looſe, and ſhew it ſelf in its own Colours, or the diſguiſe of ſome other Malady that joyns Iſſue with it.

For Modeſties ſake theſe paſſages are put in Latine

2. *Careleſneſs, Sordidneſs in neglecting their own Bodies*, is another Cauſe; *Qui enim poſt Coitum, ab Inquinamentis & Sordibus, rationabiliter & more debito ſeipſos mundificant, vel ſciunt hoc ritè peragere, rariùs hoc morbo capiuntur; quum alii, ſe negligentes, vel modum hujus operis ignorantes, dum Illuviem adhærere permittunt, citiùs & immaniùs correpti pœnas luunt:* Indeed, though an internal Taint (more or leſs) be ſcarce ever avoided by any, yet cleanlineſs *ex poſt facto* is a great means to prevent the virulent eruptions of a *Gonorrhœa*, Exulcerations, and other ſad effects in and about the Genitals.

3. *In congreſſu carnali diù ac multùm immorari, ad virulentam Infectionem & violentam plurimùm conducit; qui enim impuris corporibus immerſi detinentur, & poſt Satietatem, propter libidinis Eeſtaſin multùm inflammantur, unicâ ſaltem Coitionis vice peractâ contagium ſuſcipiunt; qui verò ſtatim abſcedunt, minùs inflammati.*

mati, haud ità facilè coinquinantur.

4. *Quo flagrantiùs libidine exardeſcunt, &, equorum inſtar, igneo Spermate ſtimulati rem ferociùs affectant, eo citiùs homines labem contrahunt, & crudelitas morbi per Signa manifeſtior evadit; atq; inde eſt, quòd totè Juniorum cenſu tam ſubitò infecti redeant; quoniam ob victum nimis liberalem & Spermaticum turgentiores facti, juventutis Ardoribus ac Libidinis unà coeuntibus, magna flamma accenditur, adeò ut de majori & magis Urente parùm ſolliciti, minimè timeant. Atq; idem dictum ſit de ijs etiam, qui Veneris palæſtrâ minùs exercitati fuerint, qui ſiquando rem obtineant, impetu vehementiore properantes celeriùs inquinantur, eò quod Spiritibus fervidioribus ad genitalia copioſè confluentibus, ardore eorum ac violentiâ Ductus Spermatici plurimùm dilatentur, ut patentior fiat via veneno.*

5. In a word; This Diſeaſe takes and breaks forth with ſome more than others, either becauſe it finds weak Bodies full of corrupt humors, bodies paſſively diſpoſed, and hereby it hath opportunity to domineer moſt; or elſe the Diſeaſe is a Relapſe, and finds Nature

yielding, and renewed and ingeminated Diſeaſes ever appear worſt: Or ſometimes other Diſeaſes fallen in are joyned with it, one Diſeaſe drawing on another congenerous; and Diſeaſes the more complicate, ſo much the worſe they are. Beſides, the new Diſeaſe falls in when Nature is weak, low, and languiſhing, ſo that its expulſive Faculty cannot keep out, nor drive off the Diſeaſes new or old. This Diſeaſe falls ſometimes but gently on the Hair, ſometimes on the Nerves, and cauſes all manner of Palſies, Cramps, Convulſions, Tooth-ach, Pains in the Limbs, Gouts of all ſorts, Lameneſſes, general Debility, *&c.* Sometimes on the Bones, ſometimes on the fleſhy parts, whence come Leproſies, Scurfs, Scabs, Ulcers, knotty Swellings, and the like: Sometimes on the Brain, whence come Sore Eyes, *Rheumes, Catarrhs, Epilepſies, &c.* Sometimes on the Lungs, whence come *Aſthmaes, Coughs, Phthiſical Conſumptions, &c.* and ſo, many other Diſeaſes, too long to deſcribe; And all this variety, becauſe the ſeveral Parts reſpectively are more diſpoſed and propenſe to receive

ceive the impreſſion of the Diſeaſe, or becauſe they do leſs repel it.--------Thus that which Phyſitians ſay of the *Fever*, that ſometimes it falls on the Humors, ſometimes on the Spirits, and ſometimes on the Solid Parts, as they are more diſpoſed to Inflammation, or do leſs reſiſt that Flame, may as truly be ſaid of this Diſeaſe.

6. You may obſerve, that Men of Drier, Harder, and Colder Bodies, are leſs ſubject to this Diſeaſe, as labouring men, poor men, and old men. I have read it obſerved, that the Venom doth not often diſcover it ſelf upon the *Turks*; and the reaſon ſuggeſted is, for that their Bodies are more Hard and Dry, and conſequently their Genitals.

7. There is Cauſe ariſing likewiſe from particular Conſtitutions, why this Diſeaſe is ſo various; and (to ſpeak in the *Galenick* phraſe, becauſe that paſſeth beſt to common Capacities) I obſerve the *Cholerick* are ſooneſt touched; the *Melancholick* moſt afflicted; the *Sanguine* make beſt reſiſtance to Infection, and are beſt cured; and the *Phlegmatick* have it lurking longeſt in their

humors: which ſuits exactly with the Saying of * *Foreſtus*, who tells us, The Diſeaſe is one thing when 'tis in a *Sanguine* perſon; another, when 'tis in a *Cholerick*; another thing when 'tis in a *Melancholick*; and ſo men are more ſpeedily or more rarely made Examples of its cruelty: which is no more than what was ſaid alſo by * *Fernelius* before him, as you may read at large. And as this is true in reference to Conſtitutions in general, ſo 'tis obſerved, that people who are near of a Conſtitution, infect one another the more quickly and dangerouſly. This alſo *Fernelius* ſhews in the ſame Chapter, *Veluti ſi Bilioſus cum Biliosâ concubuerit*: And as * *Sennertus* is large upon this Point, ſo he gives a Reaſon of it; for, ſaith he, *You are to conſider the Body infecting and infected, and there is required in all Contagion, a likeneſs betwixt the Contagious Body and that which receives the Contagion*; and he intimates, that where ſuch a likeneſs is not, there the Body that is in hazard operates Antipathetically by its natural vigor againſt the other that would infect it; but in what thing either this

* *De Lue Ven. l. 3. Obſ. 3.*

* *De Morb Contag. l. 2. c. 14.*

* *Pract. l. 6. part. 3. cap. 3.*

this Antipathy, or this Likeneſs doth conſiſt, *no man* (ſaith he) *can declare in a ſatisfactory manner; becauſe thoſe occult qualities of Bodies, and the eſſential Forms from which they flow, are not diſcoverable by us in this dark ſtate of Man-kind, nor any way to be diſcerned but by their effects.* Now that the Effect is really ſo betwixt Sinners of a Complexion, will eaſily be obſerved by thoſe Many that have opportunity to obſerve things, in their looſe way of Converſation and Licentious Living. *Zacutus Luſitanus*, that Learned Jew, hath ſaid as much as any to the ſame purpoſe; but goes further than others, and undertakes to ſhew wayes whereby Infection may be prevented. [* *Sed ſi hoc negotium attentius expendatur, inveniemus plures Cautiones, & Auxilia; quorum beneficio quiſpiam poſt concubitum, à Gallico veneno immunis evadat. Primò ergo, oportet ut poſt Venerem, in quâ non multùm immoretur, abluat totum pudendum aquâ calidâ, denudato præputio, & hoc per octavam horæ partem faciendum, idque manè & ſerò, bidui ſpatio. Hoc præſidio ſuperſtites à tantâ labe perſæpe ezadunt Mulieres, panniculos ex goſſypio in cali-*

* *Zacut. Prax. Hiſt. l. 2. c. 1. p. 67.*

calida aqua abundè madidos immittentes. Quòd ſi hæc præſtò non ſint, protinus genitalia urina lavabis. Balneum toti corpori adhibitum ſummopere prodeſt, maximè ſi cum infecto vel neceſſitate coactus, vel inſcius quis cubaverit. Vinum etiam calidum in hunc uſum mirificè confert. Verùm Aqua aliis liquoribus eſt præſtantior; reſolvit enim, ardorem temperat, mitigat dolorem, & non exſiccat.] The Engliſh of which is to be lock'd up from the eyes of common Readers, partly for modeſties ſake, and partly becauſe ſuch Cautions may prove an encouragement to wickedneſs; though I believe them (for the moſt part) ineffectual; and he himſelf doth as good as acknowledge it in the ſame Page: for * (ſaith he), *In the Venereal Congreſs, the heat being excited by Motion, a great ebullition of Spirits and Humors following thereupon, and the Paſſages of the Body being made more open, it is in a manner impoſſible, that any means ſhould be found out that may totally break and repreſs the force of the Contagion, ſo as to hinder its being communicated to the neighboring veſſels, or its paſſing on to the other Parts:* So that if his Directions

* *Velati Impoſſibile eſt, poſſe inveniri remedium quod Contagii vim ex toto refringat, &c.*

rections and Cautions ſhould at any time prevail, to prevent preſent Inconveniences uſually befalling the Genitals, and the Spermatick and Urinary Veſſels, yet the Venom may ſteal on inſenſibly, and ſeat it ſelf in the moſt hidden and ſubſtantial parts, to act its part, by way of Sally and Surprize, in the form of ſome other Diſeaſes in the future. And the ſame Author hardly grants any poſſibility of *Women-ſtrikers* eſcaping, becauſe they are the Receivers of Impurity; and though their Menſtrual Purgations may carry off part of the peccant Humors, and ſo relieve them in part, yet their Bodies being more feeble, and lyable to more Diſeaſes than Men, miſerable Conſequents are frequently ſeen to afflict them; and that is the reaſon why thoſe other Diſeaſes that are peculiar to the Sex, which were cõmonly curable heretofore, do now defie all the old Courſes and Remedies of Phyſick, ſo that the non-conſideration of the Cauſes of this great Change, and the not fitting of Medicines agreeable thereto, is the main Cauſe why they are become the Shame of our Profeſſion. I might be much more

more copious; but this is enough to ſhew, how ſlily this Infection many times ſteals into the Body, and how ſilently it may lodg there, without any manifeſtation of its Venom in the perſon, and yet that perſon may by Carnal Coition impart it to another, who may be otherwiſe affected, and have viſible Symptoms breaking out; and to ſay truth, theſe are more happy, becauſe they are alarmed to look out for a Cure, while the other through ſecurity neglect it, and ſo the Diſeaſe becomes naturalized in them, working it ſelf into the whole habit of the Body; and then what Diſeaſes ſoever the Body is moſt inclinable to, in the form of thoſe Diſeaſes it uſually appears: And ſo, ſince the time that the univerſality of Men have been infected, Diſeaſes generally are alter'd, and are rarely cured without Remedies that will meet with them in the Point of their Origination, and reach the root of the Matter.

Now, as it fares thus with Mankind by the *Pox*, ſo in every reſpect alſo by the *Scurvy*, which is a Diſeaſe every jot as much propagated by *carnal Contact*,

as

as the other, though it be a matter leſs taken notice of: For, all * Authors that write of it, reckon it in the number of Infectious Diſeaſes: They all agree likewiſe, that it may be, and is, tranſmitted hereditarily from Fathers to Children, or by clothes, or by kiſſing, or other ordinary ways of Converſation; and if it may paſs by ſuch ſlight means, then the Argument holds *à fortiori*, that its Infection may paſs much ſooner and more fully by Venereal Intermixture. in the clearing of which Aſſertion, I ſhall be more punctual by and by. In the mean while, it is evident enough, that this Diſeaſe paſſeth by the mutual Act of Male and Female, even from this one Obſervation, that where-ever either of the Mates is ſcorbutically tainted, the other never ſcapes, but catches the Taint more or leſs, and ſo, like the *Pox*, diſcovers it ſelf more or leſs according to the variety of the Tempers and Diſtempers of the Bodies on which it ſeizeth; or elſe not at all, till through decay of nature, or by ſome other Accident, it hath opportunity to ſhew it ſelf in its own Colours, or in the garb of other Diſeaſes.

* *Horſtius, Sennertus, Rolfincius, Foreſtus,* and the reſt.

If

If any think he hath reaſon to gainſay this, let him firſt obſerve *the Courſe of things*, before he oppoſe it.

II. The *Venereous* and *Scorbutick* Taint hath gotten much ground in the world, through ill management of Cures, or inſufficient wayes of Curation: As for the *Pox*, the Cuſtom hath been to run to any Pretender for a Cure of it; and thoſe Phyſicians that do meddle with it, do (moſt of them) handle it as ill as the reſt, becauſe they make uſe of the common Scope and Remedies in curing, ſo that they both miſtake the way, and have not means wherewith to carry the Patient ſafe to his Journies end, foraſmuch as the pretended Cure very often proves worſe than the Diſeaſe, deſtroys the Conſtitution, and creates or exaſperates ſome other Diſeaſe, either which was not in being there before, or which was but beginning, if it had a being.

Some of the common wayes are mentioned by the fore-ſaid D^r to be theſe:

1. The *cheap-poor-whore-Cure*, by Fontanels or Iſſues, taken up from the practice of the poorer *Spaniards*, amongſt

amongſt whom it is in common uſe, whereby nature finds ſome eaſe, disburthening part of the purulent matter, but the *Fomes* is left within, to render their condition the more deplorable; And here one thing is to be obſerved, that *Iſſues* prevailed not much in the practiſe of Phyſick, until this Diſeaſe brake into *Europe*.

2. By *Mercurial Unguent*, which may ſerve for Carriers, and Porters, and other robuſtious Bodies; and yet, even in them the Conſequents render it perilous, if not pernicious. I know, ſome are ſo ignorant and audacious, that they make it their ordinary Champion, ſetting upon every Venereous Patient with this dreadful Remedy, as if no cure could be diſpatched without it; the effects of whoſe boldneſs many have mournfully carried to their graves. What this *Unguent* is, I need not expreſs; its Compoſition is better known than truſted to, or delighted in, by Artiſts: for, this Unguent rubbed on the Palms of the Hands and the Plants of the Feet, *&c.* is ſpeedily carried to the Head, as appears by the Floods of Salivation,

vation, with other dreadful Symptoms, that follow the uſe of it.

3. By *Mercurial Cinabar-Fume*, which is yet more formidable, and to ſuch as have pectoral Diſeaſes, ſhort Breath, ill-affected Lungs, Diſtillations, weak Bowels, Colick Pains, and Dyſenteries, it is pernicious; for, uſe what care you can, the Mercurial Air will get into the Cheſt. And though great Pretenders may promiſe ſecurity in its uſe, yet it is no wiſdom to adventure your perſon, upon every one's bold raſh and ignorant confidence: Fierce Accidents will fall in; bold Undertakers will promiſe much, and perform little, and adventure upon what they cannot govern, therefore muſt needs abuſe themſelves and their Patients. I ſay not this to decry the right uſe of *Mercury*; for, take away *Mercury*, *Antimony*, and *Vitriol*, and you leave the Armory of Phyſick reproachfully weak.

4. By *Salivation* procured by Medicins inwardly taken, which, though it be the beſt of all the ordinary wayes, yet as it is managed by moſt Chirurgians, and others, generally it is attend-

ed

ed with Symptoms almoſt as ill as any of the other; and all for want of ſuch Medicins as will do the work of Salivation, without thoſe tedious and intolerable afflictions of ſwoln Head, looſe Teeth, ſore and ſwoln Mouth, Tongue, and Throat, *&c.* and the Malign Impreſſions thereby left when the work is over, which very few claw off all their Dayes after.

The committing of perſons to be cured of this Diſeaſe by common and ignorant perſons, is that which Dr * *Primroſe* cries out upon, among the *Vulgar Errors*, Credit being given to any that will brag, and promiſe to make a Cure within 10. or 12. dayes, and yet allow men their liberty; which draws men in, eſpecially ſuch as have Buſineſs to follow; and when all is done, inſtead of a through-Cure, they gain no more but a Palliation of their Pains and other ill Symptoms, for a ſeaſon, when as the *Minera* of the Diſeaſe remains ſtill within, the more deeply rooted, and in time brings forth the bitter Fruits of ſorrow, repentance, the old Diſeaſe, and new Ones to attend it.

* *De Vulgi Erroribus*, l. 1. cap. 16.

it. Therefore that the common ſort of Receipt-mongers ſhould undertake the Management of this Cure, and that the wealthier ſort of men ſhould ſo readily venture their Bodies into their Hands, ſhews the blind Boldneſs of the one, and the marvellous Indiſcretion of the other. I will graunt, 'tis poſſible an ordinary man may, by Tradition from his Maſter or a Friend, be acquainted with a Method very good and ſufficient in geral againſt this Diſeaſe, and he may do ſome Cures with it, as we ſee is done ſometimes in Hoſpitals, where they have one Cuſtomary way of Cure for all Comers (which it concerns the Overſeers of thoſe places to rectifie) but that ſuch a man ſhould think himſelf fit, with ſuch a Traditional Method, and the Credit of having cured ſome by it, to undertake the Cure in all Caſes, is terrible to conſider, ſince every rational Practiſer knows, there is ſo great a variety in the Pox it ſelf, reſpecting the nature of the Venom, and other Qualifications of the Body in which 'tis ſeated, that in a Thouſand Bodies infected

you ſhall not find two that are alike Circumſtantiated, or that yield Concurrents ſo alike, as that there will ariſe thence the like Indication for Cure in the one, as in the other; or that the ſame Method and Medicines may be uſed to one as to another, without prejudice and damage; which frequently happens to be ſo great, that inſtead of curing the *Pox*, they exaſperate it, and often precipitate Mens Bodies in this delicate Age, into other deſtoying Diſeaſes, be it pocky *Conſumption*, or what other name you pleaſe to give unto a lingring waſting Malady; the truth of which is evident by every dayes obſervation upon nice and weakly Bodies, when they come under theſe Traditional Curers and Cures; whereas the ill Conſequence of a Cure not rightly Calculated to the particular condition of a Patient, is not ſo often manifeſted, where the Patient is of a robuſt Body and ſtrong Conſtitution; for ſuch a one cannot eaſily be undone by an Error, but makes a ſhift to run all hazards through the hard Chapter of any ordinary means, and carry away ſomewhat like a Cure. I might be copious in Inſtances to confirm this

from my own Observation; but that not being fit to be done, you may see enough in the Observations of *Horstius*, *Zacutus*, *Riverius* and others, in whom you will find (as we say in our English Proverb) *What is one Man's Meat, may be another Man's Poyson what cured one of the Pox was destructive to another*; those wise Men ever varying the way and means of curing, according to the nature of the Person and Disease that they were to deal with: The want of which Knowledge and Prudence is a Cause why the Pox, instead of being cured, hath been only palliated, and under disguise gained such footing in the world, that it passeth every where with the name of other Diseases.

Nor do that Common Sort of Undertakers err only in their pretended way of curing the Pox, when 'tis *inveterate and confirmed*, but they stumble and do as much mischief in the very beginning, when 'tis but *a Clap* (as they call it) a *virulent running of the Reins*, &c. For, at first taking, the Disease lodgeth in the out-parts, *viz.* the Urinary and Spermatick Vessels, and doubtless ought to be sent back the same way that it came in,

in, as is evident by the immediate cure that ſome, as ſoon as they have been clap't, have procured to Themſelves, by repeated Coitions with ſound Women; and ſome I have known to glory in this Vilany of debauching that Sex in order to a Cure; and therefore doubtleſs ſuch Medicines are moſt proper as work in Analogie hereto, clenſing the Ureters and Veſſels deſtined to Generation, rather than thoſe iterated Purgations which emptying the more internal parts, make room for the Venom, and ſo relieve the wayes of Urine and Sperm, by drawing it thence up into the Body, to take its walk through the Blood and Bowels; and this being the common way of proceeding, then when Men reckon they are relieved from the *Clap*, the Diſeaſe is but tranſlated to other Places, where it in time improves the poſſeſſion it ſo gets, and at length ſeizeth the moſt abſtruſe and ſolid parts, vitiating the whole habit of the Body, and putting on the Viſor of ſuch other Diſeaſes as the perſon is moſt inclinable to; yea, and very myſteriouſly running in a Blood afterward from

Generation to Generation: So that it appears, the Common Undertakers do more mischief in their pretended curing of *Claps*, than they can do in attempting the Disease when 'tis become inveterate, and deserves the name of *Pox*. Let me conclude this therefore with the Sense of * Dr *Primrose*, who observes the Error of the People, to think, that Physitians are not so proper Artists for the Cure of this Disease, and upon supposal of this, they commit themselves to the ignorance and odd Medicines of common men, that will promise them cure in a few dayes without hindrance of business or pleasure, as if this Subtile Enemy were a Disease so sleight, that it might be cured without observation of rule in Eating, Drinking, Exercise, or Recreation; whereas there are no Remedies in Nature that will worm out this Disease without regular abstinence and observance; for otherwise, the force of Medicines will be broken. Moreover, we are here, as in other Ails, to have a respect to the variety of Mens Bodies, and of the Age and Nature of the Venom, in proportion whereto a choice ought

* *Ubi supra.*

ought to be made of Remedies, or elſe 'tis no wonder, if ſo many Patients are undone inſtead of being cured; this Serpentine Evil in the mean time inſinuating it ſelf into the Blood, Liquors, Spirits, Ferments, and moſt abſtruſe parts of the Body, where it becomes *quaſi Altera Natura, as it were Another Nature*, altering All, and beſtowing a kind of new Specification upon every thing within the little world of Man; ſo that 'tis no wonder, if Diſeaſes and all things elſe become new. I might be larger in ſhewing how much the ill Cures that are in uſe have contributed toward the Univerſal ſpreading of the *Pox* in its various Seminalities and Diſguiſes; but a word to the wiſe is enough.

I have a word alſo touching the ill Cures of the Scurvy in common uſe.

1. Againſt *Phlebotomie*. This Diſeaſe alſo walks abroad in ſo concealed a manner, that it is not diſcernable by any but a judicious eye, and letting of Blood is grown ſo common, that too many by this French Mode of Blooding make it like the *Prologue* to the *Tragedy*, the neceſſary *Præludium* of Cure in moſt Caſes

that come under their Hands; and ſo, ſeeing there are but few Caſes wherein there is not ſomwhat of *Scorbuticiſm* mixt, I could willingly write a Treatiſe touching the miſchiefs done by bleeding in moſt Diſeaſes, in theſe North-parts of the world, as well as Agues and Fevers; in the mean time, I ſay, the frequent opening of Veins is the Bane of our own Nation, and that it ought not to be admitted, unleſs it be in ſome few Caſes of Urgency, but not in every Caſe of Turgencie; which is too frequently done, and is too wide a Subject here to inlarge upon, otherwiſe you ſhould have Reaſons enough for my Aſſertion. At preſent, take this hint only, that if it be true, (ſince the *Liver* is turned out of the office of Sanguification) that *Sanguis Sanguificat*, Blood makes Blood of the Chyle, and doth it *ad modum Tincturæ*, then if the Blood be ſo degenerous, flat and weak, as it is in ſome Scorbutick Bodies, or extream Acid, or Salty, as it is in other Scorbuticks, that it cannot give a true generous impregnating Tincture to the Chyle, ſo as to render it good Blood, it follows then that every addi-

tion

tion of new Chyle, receives a vitious Tincture, and doth, instead of Blood, furnish the Veins with Humors, either Vapid, Acid, or Saline; and so if by opening a Vein, that Crimson liquor, which gives the sanguifying qualification and Tincture, be diminished, the consequence must needs be most pernicious in such Bodies as the aforesaid, because in them the Crimson liquor is but little, and the other exotick humors are abundant, and though much of these may be let out by Blood-letting, yet that will not compensate the loss of a very little of the other, because the other is that which hath in it self the vital power of sanguifying the Chyle, as it passeth along the Vessels, and seeing upon it the work depends, it must needs be, that when any part of the little is drawn forth, that which remains behind is more apt to be diluted with the peccant Humors which accompany it, than able to transmute the Chyle, which through want of being made good Blood, degenerates, and so every day adds more to the heap of those Scorbutick Humors, because they being most abun-

dant and prevalent, turn all into their own acid, vapid, or ſalty Nature; even as a Veſſel of Vinegar makes Vinegar of the beſt Wine, or a Veſſel of dead Wine makes bad the beſt Wine that can be added to it; and thus the whole Habit of the Body comes to be mortified, rather than nouriſhed and invigorated, which is ſo much the more to be lamented, ſince the inconvenience and damage done by Blooding ſuch Perſons ſeems irrepairable, and yet nothing more commonly practiſed than Bleeding, by vertue of the old Doctrins and Directions; which are almoſt quite out of doors in this new State of Mankind.

2. Nor doth the Scorbutick Adverſary gain ground only by *Bleeding* but as much alſo by improper means of *Purgation*, among which may be reckoned the Pills, Electuaries, Powders, and Infuſions, reputed Claſſical and Authentick, which work by offenſive irritation of Nature, rather than an amicable Cloſe with her, as may be ſeen by *Ariſtotle*'s Deſcription of the manner of Purgative Operation; for, as in his days, they had no other Purgers, ſo

ſo the great Maſters of the Faculty which have been ever ſince, have very little mended the Matter as may be ſeen by the ſeveral Pharmacopeia's Authoriſed in the world, out of all which I do profeſs I cannot pick one Compoſition proper to purge Scorbutical Humors in ſo gentle and effectual a manner as they ought to be, but inſtead of being evacuated, they are the more exaſperated thereby, and contract the greater acrimony——.Nor is it thus only with the Shop-purgers, but even by the ordinary Diet-Drinks uſed in Families *Spring* and *Fall*, much miſchief is done, becauſe people reſt upon them, and inſtead of clearing the body of Scorbutick Humors, they drain the beſt Juices down through the common Sink-hole, not being of power enough to enter into the ſecret Cloſets of the remote and ſolid Parts, thence to ſollicit away the offending *Fomes* of the Malady by Stool, and give part of it (which ought to be done at the ſame time alſo) a tranſpiration or Breathing through the Skin; but 'tis not any of the common Medicins that will act both theſe Intentions.

ons——. The like error alſo is commited by men's running to *the Wells*: not that I condemn the uſe of *the Wells* abſolutely in Scorbutick Caſes, eſpecially ſuch as have a Mine of Iron to feed them, whoſe water (as that of *Tunbridge*) hath in ſuch Caſes done much good; but I blame the cuſtomary recourſe to the other which have not ſo good a Mine, which in many Conſtitutions I have known exceedingly to fret and exaſperate the ſalty and acid parts of the blood and humors of men ſo conſtituted, and ſo they return thence with more work for a Phyſician, whoſe advice they had better have taken before they went to thoſe places. The truth is, though Purgation be neceſſary to be uſed in this Cure, yet it muſt be gentle, and performed by Specificks, which are but few good Ones in uſe; and the main of the Cure muſt be managed by ſuch Alteratives as will dulcifie the Blood; and they muſt reſpect likewiſe the Seminals of the *Pox* as well as the *Scurvy*, elſe little good will be done, theſe two being inſeparably combined in their Principles, as hath been ſignified already

ready in the foregoing part of this Book.

3. The *Scurvy* many times appears ſo exceeding like the *Pox* in all its Symptoms, that they are hard to be diſtinguiſht: Hereupon, the common ſort of Phyſicians and others, preſuming it is ſo, and Patients being perhaps guilty enough to deſerve it, make confeſſion, and both by comparing Notes agree upon a Cure; which is uſually managed by Diet-Drinks, ill-prepared Pills, and other Ceremonies of the Rack due to Sinners; which are wont to mount the Scorbutick Dominion to ſuch a height, that for the future there is no eſcaping the Tyranny, it being confirm'd by this means in the Body, and entailed upon them and their Heirs for ever: which one conſideration might be enough to deterr men, from adventuring their Carcaſes into the hand of any Tormenter, that may miſtake the one for the other. For, there muſt be one way to cure the *Scurvy* when 'tis ſimple and ſingle; and another to cure it, when 'tis in complication with a Pocky Ferment; and that which cures it, when it proceeds from a vitious

vitious Habit of Body, will not cure it in a Body that hath been vitiated by Contagion through Inheritance, or any other way of adventitious Communication from another.

4. Much miſchief is often done by the uſe of ſuch Medicins as in the Common Opinion have a Paſport every where to be employed againſt the *Scurvy*, as *Scurvigraſs*, *Water-Creſs*, and the like; which, where the Diſeaſe is lodged in a Blood and Humors full of Acidity or Acrimony,& abounding with a vitious volatile Salt,are eminently deſtructive, and render the ſalient Particles of all ſorts, the more capering, turgid, and unruly within the Veins, and ſend them a gadding thence about the habit of the Body; by which means a Foundation is laid for Agues of all ſorts, Fevers, Vertigoes, running Pains, Stitches, Head-Aches, Cramps, Convulſions, Gripings of the Guts, Short Breathings, ſtraitneſs of the Cheſt, Whites, Fluxes of all ſorts, Gouts of all ſorts, Hypochondriack, and Hyſterical Paſſions, Inflammations, Pleuriſies, and all the Diſeaſes of the Lungs. Some one

or

or other of theſe miſchiefs uſually follows the common Scurvy-Diet-Drinks and Barrels made Spring and Fall, unleſs the Perſons uſing them have healthy Bodies (for they will bear out any thing) but the weaker and ſickly do aſſuredly ſuffer, unleſs their Bodies be ſo conſtituted, that ſuch kind of Drinks do by chance fit them, and hit the Diſtemper; but that is only by chance, and who then will adventure without good Advice? for, I ſay again, that in Bodies which abound with Acidity, Acrimony, or a vitious volatile Salt (which in this Age is very frequent) or which have a Blood and Humors apt to ferment and friſk, there *Scurvy-Graſs*, *Water-Creſs*, *Common Wormwood*, *Water-mint*, *Horſ-radiſh*, and the reſt of that ſort, do a world of miſchief, whereas they are very proper in Bodies whoſe Maladies lie in a fix't Salt that needs a Reſolvent volatiliſing power to remove it; or that abound with dull, inſipid, flat, dead Humors, like decayed depauperated wines, which will never be reſtored to any tolerable State, unleſs you ſeek to cure them by adding ſuch Ingredients as will make

make them ferment anew within the veſſel. To ſuch perſons as theſe they may be of advantage, provided always there be no other Circumſtance to contra-indicate the uſe of them: which muſt be left to the Judgment of ſome Phyſician, that is ſo indeed rather than Title.

5. The Scorbutick Ferment makes its way in the world with leſs controll, in regard Phyſicians do not diſtinguiſh, or will not underſtand a difference, betwixt that *Scurvy* which comes by ones own default, through ill Diet, Courſes, *&c.* and that which comes by inheritance from Parents, or by Contagion from others, and ſo proportion not their Cures accordingly. The *Scurvy* of the firſt kind requires a Cure peculiar to it Self; ſo doth the Scorbutick Tang or Tincture of the Blood by Contagion; which is the leſs curable, becauſe it ſtealing inſenſibly into the Body, is uſually confirmed, before people either take notice of it, or look abroad for a Cure: But that which comes by Generation is incurable, becauſe inſeperable from the Principles of the Body, being

being ingrained in the very Blood, coeſſentiated with all that is within us, and connatural to us, ſo that it mingles it ſelf with all that is ours, yea, with our very Diſeaſes, and under their names it paſſeth, and ſo neceſſitates a laying aſide the old Notions and Maxims, and the introducing of new *Hypotheſes* and Speculations, and a laying of new Foundations (other than that of a narrow College, and old Piles of Books) whereon to raiſe a Body of Phyſick fit for our Age and Climate; and yet 'tis a ſhame to conſider how little hath been done that is new by any Man but our worthy Dr *Willis*, & ſome others that have lighted their Tapers at the Torch of *Helmont*. Now here give me leave to note what I forgot before in proper place, That as the *Scurvy* paſſeth theſe 3. wayes, ſo alſo the *Pox*, and the not making diſtinction proportionably in cure of it, is one of the Cauſes why it alſo hath gone on to make ſo great Triumph over Humane Nature: And though the *Hereditary Species* of both theſe Diſeaſes be not to be extinguiſhed, yet the Evils thence ariſing may be qualified, and the Diſeaſes with which

which they are clothed be the better dealt with, if Phyſicians will take pains, to form right Notions and Conceptions there-anent, for rectifying and regulating the way of practiſe, and invent ſuch Medicines as have a reach & power agreeable thereunto: For, in a word, the World is grown to ſuch a paſs, there's ſcarce a Malady which is not myſtically complicated with one or both thoſe Maſter-Maladies; which, like Original Corruption, run univerſally through the loyns of the Sons and Daughters of *Adam*, and are as it were Elements in the mixt Frame or Compoſition of other Diſtempers.

III. The Venereous and Scorbutick Taint hath made great progreſs by *Accidental Contagion*; which being the moſt curious and myſterious way of communication, is not ſo readily aſſented to by common Readers; but the thing is no new Doctrine, both theſe Diſeaſes having been alwayes reckoned among the *Contagious*. Nor let people be ſo fond as to think themſelves free, becauſe they know themſelves and their Parents honeſt; that will not ſecure them from Contagion,

Contagion, which is a thing of a Spirituous Nature, carried through the Air to make impreſſion upon ſuch Bodies as come in its way. *Fracaſtorius*, a grave Author, makes a three-fold Contagion; 1. By *Contact*; 2. The Second, by that which he calls *Fomes Morbi*; 3. The Third, *at diſtance*, which by * *Sennertus* is abridged to two ſorts, *viz.* Contagion *Mediate*, or *Immediate*: Contagion *Immediate* is that which is communicated by the groſs Contact of a Diſeaſed Body, as when one lies with a Leprous, a Scabby, or a Venereous Perſon; this every one grants may be done: Contagion *Mediate*, is, when one is infected by the mediation of ſome certain Body, though he touch not the Body of any Infectious Perſon; which mediating Body moſt commonly is the Air, it being the vehicle that conveyes thoſe *Effluviums*, *Corpuſcles*, or *Inviſible Atoms*, as it were ſmall ſhot, to do Execution upon perſons at a diſtance. This fine way of Communication ſuits not with the Conceit of a Brain, that meaſures every thing by the groſs Philoſophy which *Ariſtotle* ties men to in the Schools: Wherefore 'tis a wonder to me, why ſo Learned a

* *Pract. l. 6. Part. 3. c. 3.*

Man as *Fernelius*, *Sennertus*, & others, who in expreſs Terms allow the Peſtilence to ſeize Men thus at a diſtance, by the mediation of contagious Effluxes or Atoms; and do grant this a Truth, not onely in the caſe of that moſt dreadful Diſeaſe, but alſo in leſſer Diſeaſes as the Chine-Coughs, Common-Coughs, Catarrhs, Fluxes, the Phthiſis or Conſumption, the *Lippitudo* or ſore Eyes, Meaſles, and other Diſtempers, which do many times run through whole Families, yea, Towns and Villages, as the Conſequents of meer Converſation, or co-habitation within the ſame Air and Houſe. But *Fracaſtorius* is clear of opinion, that it ranges abroad from Perſon to Perſon, after the rate of other contagious Diſeaſes, without any Contact or Commerce corporal (ſuch as Men commonly count Corporall:) The Truth is, the ordinary groſs Conceit of the world concerning *Corporiety*, tying it up for the main to viſible and tractable ſubſtances, is that which rendreth Doctrine of this kind very difficult to apprehend; but he who reads the finer Philoſophy of this wiſer Age, and doth not take meaſure of it by the Beards of our Anceſtors, but hath digeſted the delicates

licates of the Magnetick or Sympathetick Doctrine of our Noble *Digby*, and others treating of that Subject (too large for me here to dilate upon) of the Truth of which daily experiments are a ſufficient Teſtimony, will ſoon agree upon the probability (yea the certainty) of people being ſeizable at a diſtance, by virtue of the continual Effluxes of Atomical Corpuſcles, (which one may call Bodikins inſtead of Bodies) whereby the groſſer Subſtances, uſually termed Bodies, are tangible by each other, and hold communication with each other at remote diſtances, and ſo do operate upon each other by Infection or Qualification, as well as if they did touch after the groſs manner of Tangibility, as when viſible Bodies do touch one another in ſuch ſort that we behold it with our Eyes. Agreeably to this, the ſame * *Fracaſtorius* and *Nicolaus Leonicenus*, two learned Italians, do both contend, that the French *Pox* rambles after the manner of contagious Diſeaſes, which are Epidemical, ſeizing folk that never had any carnal mixture with unclean perſons; only, here is the difference betwixt it and the Diſeaſe caught by

* *De Morbo Gal. l. 7.*

carnal Commerce, that this is uſually more viſible in its dire effects upon the Body, by Gonorrhæa's, Buboes, Ulcers, *&c.* the other which comes by Contagion at diſtance, is of a finer Nature, and dives not ſo deep preſently into the Blood and Humors, as it inſinuates into the Spirits and Ferments of the Body, and acts by time and by ſtrategem, lying ſtill till it hath an Opportunity: Not but that the other many times lurks ſome years alſo; but this more curious way of Contagion (for the moſt part) after it hath made entry, proceeds leiſurely and gradually to debauch the whole Habit of the Body, and ſeldom playes the Tyrant till it hath made a full and final Uſurpation, which it ſeldom accompliſheth without a Revolution of many years; and then perhaps it appears not like it ſelf, but it may be in the ſhape of ſome other one, or more Diſeaſes. Now here, becauſe 'tis very neceſſary, this Poynt ſhould be a little cleared, give me leave to inlarge: *This Contagion* (ſaith * *Sennertus*) *when it is received into the Body, doth not ſtand ſtill, but after the manner of other Venoms, creeps into the inmoſt and moſt hidden parts of the Body,*

* *De Lue Ven. cap. 4.*

Body, and ſometimes it quickly ſhews it ſelf; at other times it lurks long. And *Fernelius* writes poſitively, * *That it will lurk thirty years together before it diſcovers it ſelf; and thus, many (both Men and Women) that think themſelves free from all Infection, and never had Senſe of the evil upon their own Bodies, counting themſelves abſolutely ſound, do neverthleſs infect others that lie with them, and beget Children infected with that Diſeaſe.* And this holds true, whether it be taken by *fleſhly Coition*, or by *Contagion*, onely it more frequently diſcovers it ſelf after *Coition.* Our *Wynel*, * *Charlton*, *Helmont*, do report, after *Fernelius*, *Foreſtus*, *Horſtius*, *Sennertus*, and others, all in the Senſe of *Hippocrates*, that Venom may lurk in the Body, without ſhewing it ſelf, and 'tis inſtanced particularly in the Venom proceeding from the Bite of a *Mad Dog*; yet neither *Hippocrates*, nor theſe, nor any other of his Followers to this day, can give any reaſon why it ſhould lurk ſome moneths or years without any ſign diſcovering it: So this Diſeaſe the *Pox* may lurk, but the manner how, with the reaſon why, we can onely gueſs at,

* *De Abdit. rer. Cauſ. l. 2. Cap. 14.*

* *Pathologic. Exercit. p. 177.*

and that is when it comes by *Coition.* Then (ſaith *Wynel*) the *Proluvies* of it being viſcous, tenaciouſly adheres to the Bowels, and is mingled with the Humors and Spirits; but becauſe evidence of its preſence cannot clearly, and by manifeſt effects be ſhewed but on ſolid Bodies; therefore while this venereous *Illuvies* doth find Bowels ſo ſtrongly Spirited, as they make great reſiſtance and refuſe it, and obtrude it into the By-Cavities of the Body, (where it lies fermenting) the Diſeaſe reſideth eſpecially in this *Venereous Illuvies*, and is not communicated to the outward Parts: So that when, how, and where this Diſeaſe begins, acts, and creeps on, is not perceived. There are Workings, and Alterations, and Morbifick Senſations in the Body, which are not at all in ſtrong Conſtitutions perceived by their proper Cauſes, and are oftentimes attributed to other than their own; ſo that if you put together the time wherein the Bowels reſiſt the Venereous Poyſon, and the time wherein it worketh inſenſibly, together with the time of the Bodies State Neutral, it may amount to many years before the Effects, Symptoms, and Evidences

Evidences, do diſcover the Diſeaſe undoubtedly preſent; and yet that 'tis privately ſetled in the Body, often appears by ſuch a perſon's infecting another. Thus you have in *Avicen* a Story of a young woman nouriſhed up by degrees with a poyſonous Diet, who was never poyſoned her Self, yet poyſoned all that had carnal uſe of her. I remember alſo, * *Fallopius* hath a Story of twelve Scholars that had to do with one woman, yet onely three appeared to be infected, the reſt ſeeming ſound; which is to be look'd on only as a Reprieve from preſent Execution. Indeed, I the leſs wonder at the ceſſation of this Venereal Poyſon in the Body, when I hear it avowed by ſuch as have Commerce with the *Eaſt-Indies*, that they have ſuch kind of Poyſons there as do neither kill, nor ſo much as operate preſently: but after the time of a week, a month, a half-year, or a year or two, as it pleaſes the Artiſt to order the Matter; and thus divers of our Engliſh have there unawares received Poyſon at departure, which never wrought with them till their return into *Europe*: But we need not go ſo far as the *Indies* for Inſtances of that Na-

* *De Morbo Gal. cap.* 22.

ture; the Artiſts of *Spain*, and the *Virtuoſi* of *Italy*, are dextrous enough in contriving the like Doſes, whoſe Malignant Force ſhall lurk in the body, and at length, though ſlowly, yet ſurely do the Buſineſs. It is written by *Piſo* (as Mr *Boyle* cites him, *Experimen. Philoſ. pag.* 267.) who learned of the *Braſilians* divers of their deteſtable Secrets, That ſome of them are ſo skilful in the curſed Art of tempering and allaying their Poyſons, that they will often hinder them from diſcloſing their deleterious Nature for ſo long a time, that the ſubtile Murtherers do, as unexpectedly, as fatally, execute their malice and revenge. Nor can it be at all difficult to any man to apprehend the poſſibility of a *Pocky* or *Scorbutick Ferments* lurking long in the body, ſeeing the ſame thing is granted touching the *Meaſels* and the *Small Pox*, whoſe ſeminal Principles and Cauſes are ſaid to be brought along with us out of our Mother's Wombs into the world, and yet ſo to lurk within us as not to diſcover their venemous and contagious effects till after years; in ſome ſooner, in ſome later, after 20. 30. 40. years, *&c.* This

no

no man doth ſo much as ſcruple at, nor that the Seminalities of other Diſeaſes, as the *Gout*, the *Stone*, the *Conſumption*, &c. ſhould aſſociate with us from the very loins of our Parents, and not appear till 20. 30. 40. or 60. years are paſt. We ſee alſo, that for many years, divers Diſeaſes break out in men Spring and Fall, which in the Intervals are quiet; yet all the while their Seminals are in being, never ſhewing themſelves in Act but at thoſe various Turns of the year. I would fain therefore ſee ſome reaſon alledged, why 'tis not as poſſible for the Seminals of the *Pocky Lues* to be lurking, as well as the Taints and Ferments of other Diſeaſes. * *Gregorius Horſtius*, as grave a Writer as any, had a Caſe propounded to him concerning one of the *Emperor's Counſellers* that had an Ulcer in the Reins, which had baffled all the Phyſicians for many Moneths together, who dream't not of that which was indeed the Cauſe, becauſe the Patient being a grave Statesman, was paſt the ſuſpicion of wenching, and ſo they proceeded to cure it as a Malady ariſing *ab acri & aduſtâ Materiâ* from ſharp and aduſt Matter:

* l. 4. *de Morbis inſimi Ventris*, Obſ. 43.

But

But *Horſtius* adviſed them to look further, telling them in plain Terms, *That the ſtubbornneſs of the Diſeaſe did preſuppoſe ſome Malignant Reliques of the* Pocky Lues, *deeply impreſſed without Senſe or Pain at firſt upon the whole Maſs of Blood, where it lay inviſible for many years; and that they might apply what Medicines they pleaſed, all would be to no purpoſe, till the Patient be preſcribed a Courſe of ſuch Remedies as are proper for the ſaid* Pocky Lues, *to correct the whole habit of the Body; which being neglected, it is no wonder, if that Malignant Diſeaſe, having by its noxious qualities tainted the Blood, did after many years lurking, take its opportunity to ſeize upon ſo weak a part as the Reins and Bladder, and ſend ill Humors that way, and elude all thoſe Medicaments applied for the Cure; therefore he adviſed them rather to go to work with Sweating Decoctions, Bezoard. Min., Liquor Mercurii,* and ſuch like as are uſed *in Cure of the Pox: For,* ſaith he, *I had the like Caſe about ſix years ago in an old man, a Citizen of this Common-wealth, who had an ill-condition'd Ulcer in the whole Leg of long continuance, it having afflicted him many years, and grew the*

worſe

worſe for all the Applications that had been made to it. As ſoon as I came to him, I ſuſpected it an effect of ſome Touch gotten in his Youth, which had been then but ſuperficially cured; Whereſore after inquiry made into many Circumſtances of his younger dayes, I found cauſe to deal with him with Minerals proper for that Lues, *and well prepared; which being done, that Ulcer which had hitherto reſiſted all Remedies, and was look'd on as deſperate, did conſolidate of its ſelf, after which the old man married a Wife, and never complained more:* Quod autem in hoc, & in ſexcentis aliis obſervatur: *And this* (he ſaith) *is no more than what hath been obſerved in ſix hundred other Patients,* viz. *That the lurking* Lues *breaks out,* &c. And he referrs you to many Hiſtories more of his own, ſhewing the Pranks of the *Pockie Ferment*, in Internal as well as External Maladies; for, it will appear in the ſhape of the one as well as the other. And in the ſame place, this Author ſaith as much alſo for the *Scurvy*, which will lurk as long, and ſhew it ſelf in *various ſorts of Ulcers, &c.* In the Cure of which he alwayes found the common Remedies to be vain, unleſs the

the *Scurvy* were firſt pluckt up by the roots by other Medicines, and the Scorbutick Ferment driven out of the Body.

And in his 7th Book *de Morbis Contag. Obſerv.* 9. He tells a Story of a Smith by him cured, that had the *Lues* lurking in him divers years, and at length it put on the Diſguiſe of a Head-ach, in which Form it continued, till at laſt plain Symptoms of the *Pocky Lues* appeared, and then he turned him into the publick Hoſpital to be cured. And becauſe this Diſeaſe may lurk in this manner, *Zacutus Luſitanus* * gives ground for exceeding Caution to be uſed by people about their Marriages, eſpecially with ſuch as are in the ſtate of Widowhood: He bids men take heed of ſuch Widows as have the Diſeaſe called *Fluor Albus*; it being many times part of the Dowry left them by their former Husbands; and though they appear never ſo ſound, yet there's no ſecurity, if their Husbands formerly were *Cocks of the Game*; toward the reſolution of which doubtful Point, he ſaith the Counſel of a Phyſician is very requiſite. The like Caution (ſay I) ought Women to uſe in marrying ſuch men as have themſelves been

* *Prax. Hiſt.* l. 2. *cap.* 1.

been Gameſters, or that have had Gameſters to their former Wives: For, this Author fully demonſtrates the ſtrange lurking nature of this Pocky Contagion; for, if it ſo happen (ſaith he) *that there be no viſible Token of it in the Body yet the venom is not idle, nor doth it reſt, but works by little and little, till it change the ſolid parts of the Body, and overthrow their Natural Temper. Thus when the conſtitution of any part is alter'd throughly, then Nature being irritated drives the venom thence to ſome more noble part; and ſo, grievous Symptoms begin to ariſe. But herein no certain time can be fixt; for, ſome perſons fall ſooner, ſome later, and ſome very late, into this Diſtemper, who before ſeemed to be ſound and to have no Taint within them; the cauſe of which,* as he ſuppoſeth, *doth depend upon the ſtronger or weaker Faculty of the Agent, and the Diſpoſition of the Patient, without which* Ariſtotle *ſaith, nothing can act under the cope of heaven.* All which, *Zacutus* ſaith, is conſentaneous to the Doctrins of *Hippocrates*, and *Galen*, as appears by his Comments upon *Hippocrates*, *viz.* 3. *Epid. Sect.* 3. *Com.* 75. *Prorhet. l.* 1. *Sect.* 2. *Com.* 17.

and

and 1. *de Diff. Feb. cap.* 6. Now therefore, after ſo many other Evidences, let me cloſe this matter with the words of *Fernelius*; * *The Force and Efficacy of this venom lurks for a time, and in time diſcovers its ſelf by manifeſt Signs and Tokens, even as the Poyſon which comes by the Bite of a mad Dog, or the ſting of a Scorpion, lurks a while, and creeps by little and little through the Body; which when it hath ſeized, then it tyranniſeth after the manner of other Contagious Diſeaſes.*

* *De Abd. rer. Cauſ. cap.* 14.

And yet it would not ſink into the head of this Author, that it hath power of ſeizing by Contagion at a Diſtance; which ſeems ſtrange to me, that men ſhould allow it to be Contagious, and all other Priviledges belonging to Contagious Diſeaſes, and deny it this one, of infecting at Rovers. But that this Point, being of ſo great Concern to be proved, may not paſs without due evidence; if I make it appear, that this *Lues* is armed with all thoſe Arrows which are ſaid to be in the Quiver of other Contagious Maladies, then I doubt not but it will be paſt Diſpute, that this can ſhoot, ſtrike, and ſeize men at a diſtance, as well as the reſt of its Fellows.

lows. For the better underſtanding of my Deſign, know that all the notional Diſcourſes about Contagion may be reduced to theſe two Heads; either that which ariſeth from the mutual Contact of two or more groſs bodies, or that which comes by the efflux of finer or more ſubtil Bodies, ſtriking or darting themſelves into groſſer Bodies by aſſiſtance of the Intermedial Air; and thus all Bodies in the world are liable to an intercourſe with each other, and Diſeaſed living Bodies eſpecially to operate upon ſound Bodies *ad modum Fermentationis* i. e. *after the manner of Fermentation*; for the more ſubtile *Effluviums*, *Particles*, or *fine little inviſible Bodikins* (call them what you pleaſe) carrying ſomewhat of the nature of the corrupted groſs Bodies from whence they flow, and ſo inſinuating themſelves into the Pores and other imperceptible paſſages of ſuch other groſs Bodies as they meet with in their way, do there faſten and ſettle ſomewhat of their own Nature, Tincture, or Leven, which leveneth theſe Bodies, and induceth ſuch an alteration in them, as by degrees diſpoſeth them to be unſound or qualified with the ſame cor-

corruptive qualities which were in thoſe diſeaſed Bodies, from whence at firſt they came; which that it holds true betwixt contagiouſly diſeaſed of the ſame *Species* or Kind, I ſuppoſe none will deny, that ſeeth Peſtilential Diſeaſes alſo among Men, and Murrens among Cattel, and other Diſeaſes alſo among both, to fly at a diſtance from one to another, within the compaſs of their reſpective kinds: and all by the efflux of thoſe little Fermentative Particles which make the impreſſion. But that I may not ſeem to ſpeak without Authority, this is no more than what is ſaid by the grave Author * *Sennertus*, who declared all Contagion at a diſtance flowing from diſeaſed Bodies to ſound ones, to be wrought by a kind of *Fermentation: For, that the vertue of a Ferment or Leven is very great, appears by the little that fermenteth or leveneth a great loaf of Bread, and a little yeſt that cauſeth the working of Beer; and 'tis remarkable, in how ſhort a ſpace of time, a very ſmall portion of theſe Ferments doth change the Fermenteſcible Bodies into a Nature like their own:* And that he ties not this Tranſmutative effect of Fermentation

* *De Febr.* l. 4. cap. 2.

mentation only to the actual mixture and contact of groſs Bodies with each other, is apparent by what he ſays preſently after, when he tels us, *that the* * *foreſaid Contagion acts after the manner of a Ferment, which being received in a Body of the ſame Nature, induceth to it the like Diſpoſition. It, being a ſmall portion or particle of Contagious Matter ſent forth of a diſeaſed Body, lights upon a ſound Body, where being received, it acts upon it by a certain hidden power, and* à totâ ſubſtantiâ *as they call it.* And in page 689: he ſaith, that *in theſe ſickly Effluviums or flying Particles which are communicated thus to ſound Bodies, the Contagious Cauſe is ſo powerful, that it needs not a mutual contact of Bodies, but ſends forth from it ſelf ſomewhat of a* * *Subtil and Spiritual Nature, by which the Bodies that entertain it are infected, and contract the like* Labes *or Tincture.*

* *Habet ſe Contagium antea dictum Fermenti inſtar, &c.*

* *ſubtile Spirituale aliquid de ſe emittit.*

And the ſame Author more largely explains theſe things in his * Practiſe. He ſhews, that according to the common Rule, *Accidens non migrare de Subjecto in Subjectum*, if that which the common Logicians call an *Accident* cannot ſhift from Subject to Subject, then that which paſſeth from a diſeaſed Per-

* *Pract. l. 6. Part. 3. c. 3.*

son to another person by way of Contagion, cannot be an *Accident*, but it must be a Substance; now *Substance* is divided into *Spirit* and *Body*: A Spiritual Substance it cannot be, according to the sense of common Philosophers; therefore it is a *Body*, of a fine invisible Nature, *flowing out from the diseased Person, after the manner of* * *Atoms*; *which Atoms* (saith he) *a Modern Writer calls* Corpuscula *little Bodies, and Contagion is multiplied by these little Bodies, which like Seed, comprehend within themselves the whole Essence of the Disease.* From which Discourse of this most learned Author, it is evident, that though the gross Bodies of Venereous Persons do not touch another, yet the finer little Bodies which fly like Atoms from this or that Person may touch and seize another, & so much the sooner make a Seizure by that invisible Touch, by how much the more fine and subtil the said Atoms or Bodikins are, and consequently more apt to make an entrance; and then when they are lodged, though they be but as it were little Nothings in respect of quantity, yet in quality they have a mighty force, and as a little Ferment altereth

Proculdubiò Atomorum more, & corpore infecto effluens.

and

and leveneth the whole Lump, ſo theſe being a kind of *Ferment*, (or as the Greeks call it, a *Miaſma*, and the Latins *Seminium*, *Inquinamentum*, *Seminarium*) the ſaid *Ferment being received into the Body, changeth it wholly, and alters it by qualification like to it ſelf.* And no wonder, ſeeing (as our learned Dr * *Willis* ſaith) the force of a venemous *Miaſma* is ſo great, and the contaminating *particles of it ſo agile and expeditious in motion, that they will very quickly make way through the Maſs of any Body, like beams of light through glaſs, or any Diaphanous Body.* And leſt any ſhould think this improbable, becauſe many perſons who converſe with the venereouſly infected, feel no Inconvenience, give me leave to apply what he ſaith there of *Malign Fevers*, to theſe venemous Maladies, the *Freneh Pox* and *Scurvy*; for, ſaith he, *as often as the Blood receives a Taint from any thing that is venemous, whoſe venom is ſlow and of little activity, it doth not diſcover it ſelf preſently, nor break forth into direful Symptoms, until it be ripened by long time, and a Fermentation, that the whole Maſs of blood be tainted throughout, as is to be ſeen in*

* *De Febr.* cap. 12.

ſome Venoms which are communicated at a diſtance, yet have not their effect till after ſome monthes, or years. And as to the manner of Contagious Operation, his Deſcription is much the ſame with that of *Sennertus*, it is managed *by thoſe* Effluviums *which are ſent out continually from an infected Body, which being entertained by other Bodies, do preſently, like Venom, ferment with the Blood, and work upon whatſoever they find Homogeneous*, or eaſily convertible into their own nature, *till they diſpoſe it into the* Idea *of the ſame Diſeaſe; and the* Miaſma *is communicated not only by Contact, but at a diſtance.* Thus He: But that I may not want Evidence of all ſorts, let me introduce alſo the Learned Jeſuit *Kircherus*, to confirm this Doctrine of Contagious Operation at diſtance by means of thoſe little Particles floating in the Air, which Philoſophers call *Atoms, Effluviums, Corpuſcles, i. e.* Bodikins, *&c.* In his ſeventh Chapter *De Peſte*, he ſaith thus, *Every Natural Mixt Body ſends forth certain Effluviums or Effluxes of its own Power, which are not to be taken for meer qualities, or Accidents propagated from a Subject through a Medium, but they*

are

are truly and properly very little Bodies, not to be diſcerned by the power of Sight, but are the vehicles of Accidents and Properties proceeding from a Subject, of the ſame Nature with the whole Subject from whence they flow; and ſo thoſe which flow out of a Virulent Body, being of a foul and depraved Diſpoſition, do by a kind of contrariety to nature, overthrow the inward Oeconomie or Conſtitution of the Body. I value the words of this Jeſuit the more, becauſe his Book is ſo highly commended by two of the moſt Eminent Phyſicians of *Italy* now living in *Rome*, known to all the world, viz. *Sinibaldus*, Author of that Learned Piece, Entituled, *Geneanthropia*, and *Paulus Zacchias*, whoſe *Quæſtiones Medico-Legales* are a Monument of his profound and various Learning. And this Communication of Contagion at diſtance, *Kircherus* ſaith is wrought after a *Magnetick manner*, even as the Load-ſtone works at a diſtance; which leads me to our Famous Country-man Sir *Kenelm Digby*, who in his Diſcourſe at *Montpelier*, hath ſufficiently ſet forth the Doctrine of Operations at a diſtance, which who-ever denyes, muſt firſt deny his own Senſes; and

Sunt autem hujuſmodi Corpuſcula nil aliud niſi Spirabiles quædam mixti Portiunculæ, ejuſdem cum Toto Proprietatis & Naturæ, Ibid.

they are performed, he ſaith, by thoſe
* Pag. 34, 35. ſmall Bodies called *Atoms*, * *and that which we call our Air, is no other than a mixture or confuſion of ſuch Atoms, wherein the Aërial parts do predominate*; which he Learnedly proves by ſeveral ſenſible Inſtances; one is very familiar,
* Pag. 50. and 'tis this; * *I would entertain you* (ſaith he) *with the ſtrange ſubtilty of little Bodies which iſſue forth from living Bodies, by means whereof our Dogs in* England, *will purſue the ſcent of a Man's ſteps, or of a Beaſt, many miles.* To this I may add what I have ſeen, that Dog called a Blood-hound, will in a Foreſt lead a Keeper to find out a Deer-ſtealer, without laying his Noſe to the ground to ſcent the ſteps, but only by holding up his Noſe in the Air, ſnuffing up and taking in thoſe *Effluviums* which flow from the perſon that is under purſuit.

But leaving that which is obvious to every Hunt-ſman and Falconer, *Sir Kenelm*
Pag. 62. goes on, and ſaith, That *when any Hot Body* (much more a living Body, ſay I) *attracts the Air, and that which is within the Air, if it happens that within that Air there be found ſome diſperſed Atoms of the ſame nature with the Body which*

which draws them, the attraction of ſuch Atoms is made more powerfully than if they were Bodies of a different nature, and theſe Atoms do ſtay, ſtick, and mingle with more willingneſs, with the Body which draws them: the reaſon hereof is the reſemblance and Sympathy which they have with each other. Within a living Body, ſuch as is Man's, the interne Spirits do contribute much facility to the Spirits that are without. And page 116. he ſaith, *The Source of thoſe Spirits, or of the Bodies which attract them, draw likewiſe after them that which accompanies them, as alſo that which is united unto them.* Seeing then, that Humane Bodies have this power of communicating to and fro each other, becauſe of their likeneſs, let no Man be ſo ſottiſh as to deny the communication of Diſeaſes contagious at a diſtance. We allow it in thoſe Diſeaſes, the Conſumption, ſore Eyes, Coughs, Catarrhs, Fluxes, Pleuriſies, and many other which have little of Venom in them, and yet we are ſhie of granting it in the *Pox* and *Scurvy*, whoſe *Miaſmata*, Seminaries, and Ferments, include a far greater Venenoſity. We ſee what is done at a diſtance by the Sympathetick

Powder, and the Weapon-Salve by ſounds upon the Ear, by Odours upon the Noſe many miles, by Onions upon the Eyes, by the Load-ſtone upon Iron, by Amber upon Straw, by a *Torpedo* upon the Touch, by a *Remora* upon a Ship, by Thunder upon Ale, by the Alteration of Air and Seaſons of the years upon divers Fermentative Liquors, the wondrous penetration of Quick-ſilver, the mighty force of Gun-powder, the Cures by Sympathy, the deſtructions by Antipathy, and all at a diſtance; ſometimes by forced darting of theſe *Corpuſcula* or *Atoms* from one Body to another, and ſometimes by one Bodies attracting them from another, as things may happen to fall out; and if Men did not perceive theſe effects by their Senſes, they would be as hard to believe them poſſible, becauſe 'tis hard to ſhew the manner how they are done, as ſome may be to allow of the Aſſertion which I endeavour to make good, and which the Experience of future Ages and Men ſhall make good, let the preſent ſay what they pleaſe, out of prejudice or humor. There is in Diſeaſes that which *Hippocrates* calls τὶ θεῖον, *quid divinum*, which

which I tranſlate *ſomewhat of a more occult nature, of a more ſublime, Spirituous, ſubtile, finer conſideration*, than what comes from Diſcourſe upon Tempers and diſtempers ariſing from Firſt and Second Qualities, and from Mens groſſer Conceits touching the Affects and Communications of Humane Bodies; the Evidence whereof is to be ſought by Obſervation of Experience, in the Sympathy and Antipathy of things, rather than by Reaſon. Me-thinks the Learned *Valleſius* ſpeaks very pertinently to our purpoſe, * *There are many Sympathies, beſides thoſe which Galen taught, which ſeem not to be effected by the tranſmiſſion or privation of any thing, but rather by ſome occult Cauſe or Property, or whatever elſe you pleaſe to call it.* And a little after he ſaith, *We are to reckon, that there are in things ſome occult powers, and certain Incorporeal Qualities, that penetrate through Bodies, which becauſe we are ignorant of, we are apt to err in reſolving difficult Poynts and Problems, and every Man dotes about every thing.* We muſt pardon this Gentleman for not ſpeaking out, becauſe he lived in an Age that doted upon Ariſtotelian Philoſophy; wherein

* *Controverſ. Med. & Philoſoph. lib. 5. cap. 6.*

wherein though he ſaw more than his Fellows, yet he wanted apt Terms whereby to expreſs himſelf, and ſo calls thoſe things, *Incorporeal Qualities*, which our later Philoſophers more fitly term *Effluvia*, *Corpuſcula*, *Atoms*, or little indiviſible inviſible particles of Bodies, which flow from place to place, after an inexpreſſible quick and ſecret manner.

But much more is ſaid to the purpoſe by our Learned Country-man Dr *Robert Flud* in his *Moſaick Philoſophy*, a Man of a notable Brain; and though he had many Phantſies, yet you have with them mingled many moſt excellent Notions, of which this is one: * *As it is certain* (ſaith he) *that like doth naturally affect his like, (for, Nature doth rejoyce at the preſence of its Nature, and Nature doth correct and corroborate its Nature, if it be ſound, and full of vivifying wholſome Spirits) ſo alſo Nature, if it be infected by a Poyſonous and Venomous Nature, will, by uniting it ſelf unto a ſound and wholſome Nature, quickly inquinate and corrupt it, and ſo by ſuch a kind of abortive and depraved union, Antipathie is placed inſtead of Sympathie. Now how*

* *Moſ. Phil. l. 3. ſec. 2. cap. 3.*

how this is poſſible in Nature, I will in few words relate to you. As Nature doth magnetically affect and allure unto her ſelf her like; ſo if that like, which it ſucketh unto it ſelf, be inquinated or tainted with Corruption, the ſaid attracting Spirit, be it never ſo ſound, will quickly taſte of the Bitter with the Sweet, namely, of the Venom, and ſo will alſo be corrupt, equally with that Spirit which is Homogeneous, or of kin to it, in which the Infection dwells, being forced to entertain Strife, Diſſenſion, and Antipathie into his Tabernacle unawares; even as we ſee a ſound Spirit in the Animal, which thirſting after his like Spiritual celeſtial Food, which kovereth occultly in the Air, to be refreſhed by it, doth unawares draw in an Enemy with it, namely, a peſtilent and corrupt Fume, whereby it is oppreſſed and inflamed with a Putredinous Fire; ſo that it was not the appetite or deſire of the ſound Spirit to draw in that Poyſon unto it, but the Spirit like it ſelf that was poyſoned. And again, each Spirit which is encumber'd with any unnatural and Antipathetical Accident, deſireth to ſhake off contentious Antipathie, and to re-aſſume that peaceful Sympathie which it enjoyed before, but finding it ſelf unable,

unable, it is apt to cleave and adhere unto good and ſound Spirits for its relief, and if more ſound Spirits of his like were joyned unto it, then might it the more eaſily conquer and expel his Antipathetical Adverſary; ſo alſo we ſee, that one Bleareyed perſon, by darting his infectious Beams for relief at a reaſonable diſtance, becometh a Flame, which ſetteth on fire the ſound Spirit unto which it applyeth; for, ſpiritual Poyſons are like ſecret Flames of Malignant Fire. Wherefore as Spirits are by union joyned together and multiplyed, like Oyle added to Oyle, ſo doth the infectious Flame encreaſe, and feed equally upon them both: For, as the ſound Spirit deſireth the ſociety of his like to comfort it, and the corrupted Spirit ſo deſired, doth alſo covet the ſound Spirit to aſſiſt it againſt his Enemy; ſo Corruption is ſucked in by them both, and Antipathy is forced to rooſt amongſt them, and forſaketh them not, till it hath penetrated and gnawed even into their bowels, and poyſoned their very Entrails. And thus you ſee, thoſe Sympathetick and Antipathetick Operations at a diſtance, which *Valleſius* ſaith are tranſacted by *Incorporeal Qualities*, and our late Writers, by the Efflux of little Particles

Particles of Bodies, Dr *Flud* aſſigneth to the Action and re-Action of Contagious Spirits, or Infectious Beams radiating from one Body to another, yet they all mean but one and the ſame thing; *viz.* that there are wonderful, ſecret, ſubtil Communications from Contagious Bodies, which imprint their own Nature upon ſound Bodies, and render them like themſelves, by an inviſible Contact, through the mediation of finer Bodies flowing from the groſſer, as effectually as if thoſe groſſer Bodies were united by viſible and immediate Contact.

Nay * *Horſtius* ſeems to be plain enough to this ſence concerning the *French Diſeaſe*; *It cannot be denyed,* (ſaith he) *that ſometimes the* Venereous Lues *is communicated by venemous vapor, as well as by impure Contact; and that it and the Leproſie, and the like diſtempers, are contagious by venemous expirations*; and, he concludes the Queſtion with declaring this difference in Contagions betwixt the French Peſt and the grand one, only *that the Venom of this doth not ſend abroad its infection at ſo great a diſtance as the grand Peſtilence doth.* And

* *Inſtit. Med. Diſp. Quæſt.* 15.

And *Fernelius*, though his wit, in many other things divine, flie ſo low a pitch concerning the Contagiouſneſs of this Diſeaſe, as to place it onely in humor and dull Contact, yet in one place he ſpeaks out to our Sence, and ſaith, *Truly very many Men are deceived by a captious and vain way of reaſoning about this and the other Venemous Diſeaſes, becauſe while they ſee all the Symptoms of it to inſult with a corruption of ſome Humor, do think of nothing but Humor, conceive no greater matter in their Mind, and make no further enquiry with the acuter part of their Underſtanding; whether any other thing prevail in the Humor, wherein the chief Cauſe of the Diſtemper doth conſiſt; which doubtleſs, if we diſcern not by Sence, we ought certainly to comprehend by Reaſon and Intelligence, or elſe to be wrapt in an ignorance of the greateſt Concerns. Therefore that power of the Venom, being very fine, and almoſt incorporeal, and beyond the reach of our Senſes, is inherent either in a Humor, or in ſome other Body, which Subject is as it were the* Vehiculum *only of that malignant venemous faculty which affects us. For, how is it poſſible, that a meer incorporeal power*

* *De Morb. Contag. cap. 14.*

power ſhould execute force upon our Bodies? So that this acute man (you ſee) was puzled by adhering to the groſs Conceits of old Philoſophy; yet fain would he ſhake them off, and come up to our ſenſe concerning the Nature of Venereous Contagion, and doth in effect ſay, that it, as well as other Contagions is conveyable to ſound perſons, by the efflux of thoſe delicate little Particles or inviſible Corpuſcles, which paſs from other perſons that are diſeaſed, and are as it were vehicles of the Infection.

* *Aurelius Minadous* likewiſe ſaith the *Venereous Lues* ought not to be defined by Quality, but by name of a Bodily Subſtance, and that it ſo paſſeth from Body to Body by Contact, * *De Virulentia Venerea.*

Tangere enim, & tangi, niſi Corpus, nulla poteſt res;

but what kind of Contact he means, is evident by what he ſaith afterward in his 30th Chapter, as he is cited by * *Sennertus*, where the Bodily Subſtance wherein this Diſeaſe is contained, is by him called a *fine Vapor or Spirit, or Spirituous Subſtance, endued with an occult* per- * *Pract. l. 6. Part. 4. Cap. 3. de Lue Ven.*

pernicious quality and power, able to infect and corrupt all the parts of the Body, and turn them to its own Likeneſs, which may be done by a ſlight kiſs, or putting on another mans garment: But he needed not have inſtanced the Paſſage of a *Kiſs*, for, though it be but a ſlight Contact, yet 'tis a groſs one of two groſs Bodies, and what need of ſo much as that toward an Infection? when as the ſame Author ſaith, the Vehicle of the *Venereous Lues* may be a *Spirit or Spirituous Subſtance*, a thing of ſo ſubtil and penetrating a nature, that it can make its own way upon and through Bodies, without the help of immediate Contact: And this, *Sennertus*, in the ſame Chapter juſtifies him in, ſaying, *that it may be reſolved into Vapors and ſmalleſt Corpuſcles containing the whole Eſſence of the Diſeaſe with power of diffuſing it to others, deſtructive to the Natural Spirits by the impreſſion of its Venom, which is of an inexpreſſible occult nature and condition.* And yet after all this, *Sennertus*, in other places of his Book, is ſo groſs as to deny its being communicable at a diſtance, as other Contagions are, by the efflux of thoſe virulent particles which

which flow from diſeaſed Bodies, but ties up the Infection to immediate Contact, either by *Coition*, *Clothes*, *Sweating*, *Kiſsing*, or the like; which is readily granted, but all I contend for is, that the men of his opinion, who grant that fine way of Intercourſe betwixt Bodies which I have been thus long delineating, and the notable Operations and Effects thence enſuing, would produce ſome tolerable reaſon why they deny it in reference to the *Pockie Contagion*. All the reaſon I ever yet met with in him and other Authors is, becauſe *the Diſeaſe* (they ſay) is lodged *in a ſlow, dull, viſcous matter*, which though in moſt Caſes it be falſe (for, I have known many infected with ſo active a Venom, as hath ſet them all in a Flame, and almoſt blown them up in three days) yet admit it were always lodged in ſo dull a matter, nevertheleſs he and they all agree, that from the dulleſt and groſſeſt Bodies there ariſe fine vapors and ſpirituous Subſtances, which in other places of their works are better termed *Particles*, *Bodikins*, *Atoms*, *Ferments*, and I know what little inviſible Matters, containing Virulen-

cies and Infections, which have power to alter into their own likeneſs, what Bodies ſoever they meet with that are capable of the impreſſion: which having been confeſſed alſo in other parts of their Works, and being conſentaneous to the ſenſe of our beſt Modern Philoſophers, it matters not what their private Phantſie be in one place touching a particular Diſeaſe, when in ſo many other Places, they concur with the publick ſenſe of other the beſt Authors concerning the general nature of Contagion, and the ſpiritual delicate manner of its conveyance from one Body to another: For, thus they touch one another; though not viſibly, after the manner of common Contact, yet every jot as effectually, by the intercourſe of thoſe Corpuſcles which paſs to and fro betwixt them. And thus, I ſuppoſe, it is clear enough how the *Pockie Lues* may be propagated by accidental Contagion, even to innocent perſons: But you will ſay, if this be ſo, who then can be ſafe? I anſwer, there is no Aſſurance for any one; only I determine, according to the ſenſe of all Authors, that ſome perſons being naturally of more weak Entrals,

trals, Conſtitution, and Spirits, and more luxurious or looſe in Converſation than others, becauſe leſs able to reſiſt the influence of Contagious Corpuſcles and Ferments, which are continually floating up and down in the Ambient Air, ready to aſſail all perſons that come in their way.

Now all that hath been manifeſted in the paſt Diſcourſe in reference to the *Pox*, is, by the ſame force of Reaſon, applicable alſo to the *Scurvy*, which is reckoned by all Writers among *Contagious Diſeaſes*, and ſo muſt needs have its Rambles and Rencounters at the ſame rate, and may take up its reſidence at pleaſure, and become Joint-Tenant with the other in any Earthly Tabernacle. Therefore taking it for a grantable Point, I will not be tedious to confirm it; let it ſuffice that * *Sennertus* is very poſitive, and ſaith, the *Scurvy* may be contracted not only by *ill Diet*, *bad Air*, by *Contact*, by *Converſation*, by *drinking in the ſame Cup*, by *breathings of the infected*, by *ſweating*, by *kiſſing*, by lying with a Scorbutick Woman, or with one that hath the Diſeaſe called *Fluor Albus*. But how to make out the

* *De Scorb. c. 3.*

reaſon of the communicability of this Diſeaſe by Contagion, he cannot tell; only he ſaith, *there ſeems to be the* * *ſame reaſon in this as in the French Pox: For, as that Contagion may be admitted by divers Parts of the body, and being once admitted, doth by little and little penetrate into the whole, and not only taints the ſpirits and humors, but imprints the like Diſpoſition upon the ſolid Parts; ſo alſo the Scorbutick Contagion, which way ſoever it be admitted into the Body, infects and taints the Blood, and imprints the like Diſpoſition upon the Bowels ordained to Nutrition, and weakens them ſo, that they are not able in the future to generate good blood, but that which is vitious and Scorbutick.* The learned *Horſtius* likewiſe declares it a Contagious Diſeaſe, * and that the Contagion may be propagated *by infecting the Spirits, which are the Authors of all Action.*

* *Videtur eadem eſſe ratio quæ in Luc Venerea.*

* *De Morb. Contag. P. 373.*

Thus having ſhewn in part, that both the *Pox* and *Scurvy* are unavoidably propagated from one to others by the finer and more myſterious way of Contagion, it's to be conceived, that if this be ſo, then it holds *a fortiori*, to oblige our belief, that theſe infectious Diſeaſes

may

may be propagated by the more visible and gross ways of Contagion. *Horstius*, in the place before-cited, inveighs so against the common Complement of *kissing* among us Northern people, that 'tis no wonder if the wiser Nations have excluded it. In *Holland* (he saith) 'tis no marvel that the *Scurvy* gets ground so among them, *where they have as many kisses as salutations of Women, which not only the younger sort expect, but those that are old and wrinkled, if they be not complemented with a kiss, do take it as a Contempt and Injury done them.* He shews also, how *in* Saxony *it is encreased by tipling in the same Cup.* In the Centuries of * *Fabricius Hildanus* I read of one infected with the French Disease only by the garment of another. *Molenbroccius*, a late German Writer, in his Book *de Arthrit. Scorbuticâ*, p. 15. saith the *Scurvy* is contagious as well as the *French Lues*, which is the reason that divers *who never used an ill Diet that might incline them to the Scurvy, yet being infected by a Scorbutick person, they suffer the same Symptoms.* The reason of this we may pick out of our renowned * Dr. *Harvey*, who saith, *that*

* Cent. 2. Obs.

* Exercit. de Motu Cordis, p. 61.

Contagion being impreſſed upon any particle, is carried along with the Blood as it returns to the heart, and thereupon it afterward taints either the whole Body, or corrupts ſome particular parts which are moſt liable to receive the Venom.

* l. 1. Obſ. 134. *Zacutus Luſitanus* in his * *Praxis Admiranda*, ſaith thus; *after I had publiſhed my Firſt Book* de Med. Princ. Hiſt. *where, in the* 73. *Hiſtory I have proved, that the French Pox is contagious at a diſtance; by chance I met with a very rare example of a Diſeaſe in the eyes called* Opthalmia Gallica, that is to ſay, Inflammation and Soreneſs of the eyes proceeding from a Venereous Cauſe: *The Servant which attended the Patient, and only brought him Clothes to wipe himſelf after Sweating, and victuals to eat, was taken with the very ſame Diſeaſe, and could not be cured by any other means than Mercury; let none doubt therefore* (ſaith he) *but the Contagion of the French Pox will work at a diſtance.* He that doubts, let him read *Minadous de Lue Ven. cap.* 5. This example of his ſome perhaps may believe, but what is this to thoſe that never come near the Chambers and beds of infected perſons? I anſwer, this Infection

fection is not limited to such a Circumstance only, though he instance it, but walks abroad in the open Air also, which is likewise the sense of *Zacutus* in his 73. *Hist.* before-mentioned; where, having proved against *Mercurialis*, this Disease to be contagious at a distance, he concludes *the Natural Spirits may carry Contagion through the Air from one to another.* He saith it is so even in *Cutaneous Diseases*, and * *Avicen* acknowledgeth it in leprous Cases, for that people were kept from coming near the Air where such persons were. Therefore *Paulus*, l. 4. c. 1. adviseth to send them *far remote from Towns and Cities, to the very utmost bounds of the Country, lest they infect others.* Thus among *Zacutus* his Countrimen the *Jews*, they were shut up without the Camp from the rest of the Congregation: whereupon he determineth, that if in Cutaneous Cases of Leprosies, Scabs, Scurfs, Itches, *&c.* and if in other Distempers, as sore Eyes, Catarrhs, *&c.* Contagion do fly at a distance through the Air, it must needs be so likewise in Pocky Communications, *seeing* (saith he) *they have all the Conditions requisite unto Contagion, as* * Fracastorius

* 3. 4. Tract. 3. cap. 1.

* l. 1. De Contag. ult.

caſtorius *ſhews out of* Ariſtotle, 7. Problem. 7. And for this cauſe he adviſeth people to be very wary what perſons they converſe with. What need I then, if this be ſo, inſiſt further upon the groſſer ways of Infection? which, after all this evidence, will doubtleſs the more eaſily be allowed. I might run over the whole Bead-row of Stories told by Authors, as how * *Foreſtus* tells of a young Girl that was pockily infected by one that gave her only *a kiſs as ſhe was dancing.* And *Horſtius* tells of another Girl that was infected by being Bed-fellow to the Concubine of a certain Gentleman; but they generally agree it may be done by *Kiſsing*, by the *ſame Bed*, the ſame *Cloſe-ſtool*, by Meats and Drinks, by *Sweat*, by *Breathing*, by the ſame Hot-houſe, by Linen, by Clothes, by the ſame Cup, by putting on anothers Glove or Stockin, and indeed by all the ways of Converſation. And what in theſe reſpects is ſaid of the *Pox*, is obſerved likewiſe, and avowed of the *Scurvy.*

* *De Lue Ven. Schollia in Obſ.* 2.

b *De Morb. Contag. Obſerv.* 3.

IV. The fourth way of Contagion is that which runs by *Hereditary Propagation*, and by this Courſe alſo both theſe Diſeaſes

Diſeaſes gain footing in the world. *Hereditary Diſeaſes* (ſaith * *Horſtius*) *do paſs as it were by Tranſplantation, becauſe the Seeds of them are propagated from Parents to Children, from whence it follows that they have Tinctures very ſtrong and conſtant. Hence it appears what kind of Diſeaſes eſpecially are Hereditary, to wit, Tartareous Diſeaſes, which have roots deeply fixed, and hard to be eradicated, as are the Stone, the Gout, the Leproſie,* (to which let me add the *French Pox and Scurvy*) *whereas on the contrary, other Diſeaſes, which they call Sulphureous and Mercurial, to wit, Fevers, Inflammations, Catarrhs, and the like, are not eaſily propagated to Children, becauſe the roots of them are more moveable, fluxile, and ſooner tend to a Reſolution.* Therefore ſeeing Experience ſheweth, that there are no Affects more rootedly fixt than the *Pox* and its Comrade, when they have once ſeized themſelves of the Body; it is no marvel, if they ſo conſtantly run in a Generation. * *Sennertus* tells the manner how the *Pox* becomes an Hereditary Diſeaſe, and ſaith, it is done by *being transferred with the Seed and Menſtrual Blood from Parents into*

* *Diſſert. De Anatom. Vit. & Mort.*

* *De Lue Ven. cap. 4.*

into the young one: For, when the Blood, out of which the Seed is generated, is infected and vitious, then the Seed becomes like it, and diſeaſed; alſo the Mothers Blood being impure, with which the Child in her womb is nouriſhed, infects it, which Infection, after Children are born, breaks forth upon them ſooner or later, according to the greater or leſſer force of Virulency: Which Diſcourſe of his is the general Senſe of all Men, and confirmed by frequent Experience in the practice of Phyſick, as may be ſeen by the Hiſtories of ſuch as have left their Obſervations upon Record; and truly, that Phyſician hath known little in this great City, who hath not ſeen what miſerable Spectacles are frequently brought forth into the world upon this Account, many of which have paſſed out of the world again as if they had been afflicted with other Diſeaſes; and others that lived have languiſhed miſerably as incurable, till ſome wiſer than ſome, have had recourſe to Antivenereal Remedies. * *Zacutus* treating of the Hereditarineſs of this Diſeaſe, ſaith, *That there is a depraved and diſeaſed excretion in the Seed, or a certain occult quality infecting the Seed and*

† *Prax Hiſt. Cap. 1. De Morb. Gal. p. 268.*

and inherent in it, which impreſſeth the like Tincture upon the Off-Spring; For, the diſeaſed defects of Parents are derived by force of the Seed of Generation, yea, and many ſecret Marks and Characters; yea, and Children for the moſt part reſemble their behaviour, their gate, and countenance. The truth hereof is evident, becauſe that Children, not only after they are born, become Heirs of the French Pox, but likewiſe bring it along with them out of the womb.

Mercatus, the Learned *Spaniard*, hath among his Works, a little Treatiſe of *Hereditary Diſeaſes*, wherein he ſignifies the ſame thing to the full; but becauſe ſome are apt to object, that if it paſs thus Hereditarily, then it would alwayes be ſo; whereas others by Experience have found, that ſome Children of the ſame Generation are infected, and ſome not, and ſometimes all a Man's Children ſcape free, yet it falls foul upon his Grand-Children. This latter is avowed by *Mercatus*, and * *Zacutus* hath formed it into a Queſtion, and reſolved it, *Utrum Morbus Gallicus, illæſis filiis, tranſeat in Nepotes?* that is to ſay, *Whether the French Pox may, without touching a Man's*

* *ubi ſupra.*

Man's Children, ſeize upon his Grand-Children, and ſo paſſing from the Grand-Father, as it were ſkip a Generation? *It ſeems hard* (ſaith he) to conceive in this Caſe, *how the Children ſhould ſeem free themſelves, yet beget others infected; for, a corrupted Seed derived from a corrupted Body, ſeems to import a neceſſity of corrupting the young one begotten, and that this Corruption ought to be propagated to the Second and Third Generation, ſeeing theſe Generations draw their Original from one Beginning only. The Cauſe of this Event* (ſaith he), *is becauſe the* vis Formatrix, *the Formative Power, though it hath the* Idea's *of all belonging to the Father, yet it is not equally excited by them all unto operation, but by ſome more, by others leſs, or not at all. From which it comes to paſs, that ſometimes it is not excited to form a Member diſeaſed, and by conſequence the Son will become ſound in that part; but ſometimes it may beget a diſtemper of the Father in the like Member of the Son, and produce a Son diſeaſed, and like to the Father; which the Formative Power may effect in the Grand-Children in a contrary manner.* But me-thinks yet, there is more may be ſaid to the Buſineſs, and what

what is to be ſaid of this Diſeaſe relates alſo to the *Scurvy*; for, in the fore-going part of this Treatiſe I have made it appear, that Venemous and Contagious Diſeaſes are of a ſtrange lurking Nature, and though the Grand-Father be infected, yet his Son may ſeem free, yet not really be ſo, becauſe the infection may be as it were in ſome By-Cavity or Dormitory in the Body, taking a nap, by the influence which through ſome Accidental Advantages befalling his Body, the vigorous Conſtitution thereof may have over it, ſo as to quell and command it, and make it lie ſtill and quiet, that it give no diſturbance to him; Nevertheleſs the Seminality or Ferment of the Diſeaſe, being lodged in the Seed, and con-naturalized therewith, may inſenſibly paſs from him with entire force, to do execution upon the Grand-Children, becauſe perhaps, they may be of Spirits leſs ſtrong, of life leſs temperate, and of Conſtitution of Body leſs able to reſiſt the Power of the Venom, and keep it under, after it is transferred unto them. Beſides, it is obſervable, that there is a great difference which may ariſe from the Conſtitution of Mothers

thers; for, the Grand-Father's Wife may be of ſo excellent a Conſtitution, as that what ſhe contributes in mixture, may ſerve ſometimes to correct the ill Ferment gotten into his Seed; but the contrary may fall out in the Son's Wife, and ſo the ill Ferment in the Son's Seed comes to prevail over the Grand-Children; which myſtery is thus deſcribed by the Learned *Horſtius* in his *Medical Inſtitutions*, *De Cauſis Morborum Internis*, *Quæſt.* 1. And in his Diſſertation, *De Anatomiâ Vitali & Mortuâ*, he ſaith, the *Stone* will thus run from Grand-Sire to Grand-Child, and ſkip the Son, the reaſon whereof he aſſigneth to the different Conſtitution of the wombs of the Mothers, which (ſaith he) I have more fully handled in my Tract concerning the *Scurvy*, and other places. And in his 12th *Paragraph* of the firſt Section of that Tract touching the *Scurvy*, among other Cauſes which hinder the appearance of an Hereditary Diſeaſe, he reckoneth this, *That ſometimes by the power of the Natural Balſam of the womb, the ſtrange Rudiments or Ferments of Diſeaſes are ſubdued and overcome.* And in the *Second Section* and firſt *Paragraph*, he ſpeaks more

more fully, *That ſometimes the Grand-Sire infected with the Scurvy, propagates this Diſeaſe, not upon his Son, but upon the Grand-Child, the Son in the mean while being free; becauſe it may ſo fall out, that he may have a Sigillation or Character impreſſed upon him from the Grand-Father, the active power whereof is obliterated by the excellency of the Mothers Seed and Blood; which nevertheleſs breaks forth again in the Grand-Child, in caſe he hath a Mother of Conſtitution weaker than was the Grand-Moiher.* The illuſtration of which Truth, he ſaith, is more amply ſet forth in *Mercatus*. By the like proportion of Reaſon it may come to paſs alſo, that Brothers and Siſters of the ſame Father and Mother, may happen to have ſome more ſome leſs Tokens of theſe Contagious Diſeaſes upon them, and ſome none at all, becauſe the Bodies of their Parents may at ſometimes, be in better temper, their Seeds more vigorous and flouriſhing, and conſequently, have leſs of the Contagious Ferment impreſſed on them, than at other times, according as their Bodies come to be more or leſs altered by the accidental Emergencies and Extravagancies of Life.

Life.------But enough of this; let it ſuffice, that the great Increaſe of the *Pox* and *Scurvy*, and of other Diſeaſes alſo not ſo Contagious, by Hereditary Propagation, is a Matter that the world is very well convinced of, therefore I ſhorten this Diſcourſe.

V. The laſt way of Propagation to be inſiſted on, is that of *Lactation*, or by ſuckling of Infants. It would make ones heart bleed, to ſee what a world of theſe Innocents die every year in this great City; ſome under the form of the *Rickets*, *Teeth*, *Conſumption*, *Convulſion*, *Griping of the Guts*, and others of other nameleſs waſting Diſeaſes, and not one Phyſician of a hundred that conſiders the Seminals and Ferments of the *French Diſeaſe*, and the *Scurvy*, which ſo many bring into the world with them that are begotten by the honeſteſt of Parents, and others contract them afterward by ſucking their Nurſes, perhaps as honeſt as the Parents; and if they chance to conſider aright the root of the Diſeaſe, 'tis a thouſand to one, whether they have a fine little Remedy fit to ſtrike at it in ſo tender Bodies, and which are ſo touchy and peeviſh, or weak, that they will hardly

hardly take any thing; for, the Medicines, uſed in the common Trade-way of practiſe, will not reach it.

* *Sennertus* ſaith of the *Scurvy*, *à nutrice cum lacte inſtillari*, that it is *inſtilled into Infants with the Milk from their Nurſes.* The like of the *French Diſeaſe*, That it is * *communicated to Infants with their nouriſhment and Milk from corrupt Nurſes: which* (ſaith he) *is the moſt powerful manner of Infection, ſeeing that when the Milk they ſuck is changed into Blood, and this Blood becomes the Nutriment of the whole Body, the Venom is by this means diſperſed throughout the whole, and moſt deeply inſinuates it ſelf thereinto, and therefore thoſe that are this way infected, are rarely and very difficultly cured.*

* Cap. 3. De Scorb.

* De Lue Ven. cap. 4.

* *Foreſtus* alſo ſaith, *That Children by the Milk which they ſuck, contract the Venereous Contagion with their Mouths; and that Nurſes themſelves alſo by giving ſuck to Infected Children, contract this Diſeaſe from them by their Nipples, the firſt Sign whereof is when they have Ulcers breaking forth upon their breaſts; which is a thing* (ſaith he) *that I have often ſeen.* But in the ſame Second *Obſervation,*

* De Lue Ven. Schol. in Obſ. 2.

on, he gives us alſo the Story in particulars, ſaying; A certain Man in the *Hague* married a fair young Woman, whom he infected, yet ſhe conceiving by him, brought forth a Child, which Child being infected from the womb, and put out to an honeſt poor Woman to Nurſe, the Nurſe alſo became infected; and the Contagion was ſo active, that it ſeized two more of the poor Nurſe's little ones, and a girl of hers alſo that was ſix years of Age. Theſe were all under his Hand together for Cure. The like Caſe almoſt is related by *Amatus* in his Centuries, *Cent.* 1. *Curat.* 49. And that Nurſes may thus ſuffer from Children, *Sennertus* affirms in his fore-cited Chapter, and gives this Reaſon of it, *becauſe by the Infants ſucking, the Nipples are heated, and ſo the Pores of them are the more opened, whereupon they the more eaſily take in the virulency.* The like is affirmed likewiſe by * *Zacutus*, that when the *Children take it of the Nurſes, it diſcovers it ſelf uſually about the Mouth or Head firſt: But if the Nurſes take the virulency from the Children, then their Breaſts and Nipples are affected; and the virulent humor creeping thence more deeply*

* *Prax. Hiſt.* l. 2. cap. 1. *De Morbo Gall.*

ly into the Body, the whole is afterwards contaminated by the Contagion. These things hold true alike, both of the *foul Diſeaſe* and the *Scurvy*, as you may ſee in * *Molenbroccius*, who likewiſe declares, *That the Infection may come from the Milk of the Mother, or of the Nurſe.* But in ſo plain a Caſe as this, the Reaſon whereof is ſo obvious, the Experience ſo common, and which (I think) no Body will deny, I liſt not to be tedious; I ſhall turn my Diſcourſe therefore into Advice, that ſuch Mothers as are to be ſuſpected of either of theſe Infirmities, be perſwaded to tranſplant their Children into the Arms and care of other Women ſounder than themſelves, and that they have a ſpecial regard to the finding out of ſuch, and not to take for a Nurſe the Wife of any Man, (be ſhe never ſo honeſt, or ſeem ſhe outwardly never ſo ſound) that is either an idle Huſband, or Luxurious Company-keeper; for, they ſeldom bring any good home; and though they perhaps do not ſtray in Venery, yet they converſe too often with ſuch as do; Beſides, their intemperate drinking, & extravagancies fill them with ſuch ill Humors as ſerve ſufficiently to

* *De Arthrit. Vagâ Scorbuticâ*, p. 293. See *Oſwald Grembs*, l. 1. cap. 8. *de uſu part.* Sect. 3. p. 77.

give ill Tinctures to their own Bodies, and conſequently to their Wives, by that cloſe Communion of Bodies, and thereby a grand intercourſe and communication of Spirits, which they have with each other; ſo that a marvellous Alteration is wrought in the Milk, by the leaſt ill Ferment injected into the Womb of the Nurſes; which is eaſily apprehended by ſuch as underſtand the quick Intercourſes and Sympathies that paſs betwixt the Womb and the Papps, by the mediation of particular Veſſels, and otherwiſe. Have a ſpecial care therefore, what Woman you chuſe for a Nurſe; for, I have ſeen many a Child undone in its Conſtitution, by putting it abroad to Nurſe; for though the Woman may be careful, yet all may not be right with her; and on the other ſide, where Prudence hath been uſed, I have ſeen many a weakly Child, wholly altered for the better in its Conſtition; and the Seminal ill Impreſſions derived from the Parent have been ſo far ſubdued and altered, that the Child hath gained as it were a new Nature, and put on the good Conſtitution of its Nurſe.

The

The moſt acute and noble *Helmont* (whoſe Doctrin, ſo much of it, as I have laboured to underſtand, I cannot but admire) in his brief Diſcourſe *de Nutritione Infantum* of the Nurſing of Infants, penetrates into the bottom of the buſineſs, and ſtretches the Advice yet further; and is for nurſing of children up by Hand, rather than by Suckling; for, after he hath told how many ways the Milk comes to do miſchief, as firſt upon the ſoul of the Child, the Seeds of ill Morals and Natures (which * *Plutarch* alſo ſhews) ſtreaming along with the Milk, do implant within it all the Vices, Imperfections, and lewd or ungenerous Diſpoſitions of the Nurſe: ſo alſo upon the Body; for, the beſt Milk too often cauſeth cruel Diſtempers, by ſouring and curdling in the Stomack, through a vitious Ferment there lodged which corrupts it, and from thence come ſo many Vomitings, Worms, Gripings, Fevers, Fluxes, Epileptick and Convulſive Fits, with many other unthought of occaſions of death. Sometimes likewiſe the Milk is of a Cadaverous Nature, as when the Nurſe either proves with child again, or grows Feveriſh

* Περὶ παίδων ἀγωγῆς.

veriſh, or is under grief; or ſome occult Diſeaſe, or cauſe, lurks within, whereby various Impreſſions are fixt upon the Milk. But this is not all; he ſhews, there are ſtrange defaults by Milk tranſplanted into children, after the manner of hereditary Diſeaſes, as the Leproſie, and other Peſts of that Nature, Hectick Fevers, the *French Pox*, and other Contagious Maladies, which by that way as effectually ſeize them in the Cradle, as by Seminal Tincture in the Mother's Womb.

But you will ſay then, what would you have us do to bring up our Children? Is not Milk the Food ordained for them by God in the Courſe of Nature? and can any thing be more proper than what is moſt natural? I anſwer, that nothing is more natural and proper, provided that the Milk do not ſtream from a Corrupt Fountain; but ſince that in this *Venereous* and *Scorbutick Age*, the Frame of Nature for the moſt part appears corrupted, and that even in Country-Cottages, which lie remote from the Contagion and Converſe of the greater Towns and Cities, and partake not of the exceſſes of Luſt and Diet, it

it

is a hard matter to find out a Woman *in puris naturalibus* a Nurſe untainted, and requires a curious head and eye to diſcern her: and ſeeing when all is done, there can be no certainty, becauſe either her Husband may be ſome way Tainted, or her Parents that begat her; and the Seminals of that Taint traduced from them or one of them, to her by generation, may be latent in the blood, and ſhe found only in ſenſe as to her ſelf, and but in outward appearance to others; therefore She that uſeth good judgment in chuſing a Nurſe for her Child doth well, and may continue it there two or three Months for neceſſities ſake, till the Child come to ſome ſtrength; but She doth better that removes it from the breaſt as ſoon a She can, and betakes her ſelf wholly to the breeding of it up by hand; for ſo, a harmleſs Suſtenance may be prepared, not ſo eaſily corruptible in the Stomack as Milk is, and ſecure from thoſe ill Impreſſions and Tinctures which may come along with the Milk from the Nurſe, notwithſtanding all the care and diſcretion that hath been uſed in chuſing her. I am the more large in diſcourſing this,

becauſe 'tis grievous to ſee how many thouſands of healthy children do ſuffer by Nurſing with Womans Milk; when as very few who are bred up by hand do miſcarry, or ſuffer ſuch ſtrange diſtempers and afflictions as everywhere befall the other; Nay, in the ſame Family, it hath been often obſerved, that when the children nurſt by ſuch Milk have two or three in number ſucceſſively been miſerable ſickly; the reſt born afterwards being bred up by hand, have meerly by this alteration of the manner of Nurſing, proved ſound and lively. If it were needful to inſtance in a matter, that, by obſerving, you may ſee with your own eyes, I might inlarge; only I tell you, *Helmont* hath a Story of an Earl, whoſe Fourth Son he ſo ordered in breeding up by hand, that he became more ſound, ſtrong, tall, ingenious, and valiant, than the reſt of his Brothers.

And thus, having run through thoſe Five ways, whereby the Contagious Seminals of the *French Pox* and the *Scurvy* have been propagated in the world, I ſuppoſe there are no perſons breathing, but have cauſe enough to ſuſpect the poſſibility of their own being tainted

one

one way or other, and to believe, that this Taint, like *Original Sin*, hath overſpred the whole Face of Mankind, and by tract of time, one way or other, introduced an univerſal Alteration and Depravation of Nature, and conſequently an Alteration of the Nature of all Diſeaſes from their ancient State and Condition, it being now *quaſi Altera Natura*, become as it were another Nature unto us.

CHAP. IV.

A further Proof of this great Alteration, by inquiring into the manner of the complication of the Pox *and* Scurvy *with other Diſeaſes.*

CConcerning the *French Lues*, *Foreſtus* ſaith, *ſenſim in univerſum orbem eſt diſſeminaat, it ſpred it ſelf by little and little over the whole world: Euſtachius Rudius*, as *Sennertus* cites him, ſaith, *Maxima pars mortalium eo infecta*, the greateſt part of men

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men were infected with it; which in the very ſame words is affirmed by * *Fracaſtorius*, and that it was become general throughout *Spain*, *Italy*, *France*, *Germany*, and almoſt all *Scythia*. Wherefore, if ſo many years ago as the days of thoſe Authors, this Diſeaſe was become ſo univerſal, what a footing then may we imagine it hath gotten, in the revoluti- of ſo many more years as have paſſed ſince their time? It is now from the firſt beginning of it in *Europe* about 170. years, as all Authors agree, it not being known here till the year of Chriſt 1493. ſo that it hath had a fair time to take poſſeſſion of the little world of man; And though * *Rudius*, in his time was of of opinion *it might have been utterly extirpated by help of Phyſick, had ſome one Prince had the government of the great world that would have uſed his Authority to regulate men, and had there been an unanimous Conſent of many to conſpire againſt this Diſeaſe*; yet (by the leave of ſo grave an Author) I look upon this Conceit of his as but a meer Phantſie, and utterly impractible, not only in reſpect of the impoſſibility of getting men to be of a mind about it, but even in re-

*De Morb. Gal. c. 7.

* *Si unus eſſet Mundi Princeps*, &c. *lib. 5. de Morb. occult. c. 11.*

regard of the Nature of the thing it ſelf, it being a Diſeaſe rooted in Contagion, and by all the ways of Contagion, ſecretly and unavoidably growing upon Mankind; and that it did ſo, appears by this, that both * *Fracaſtorius*, and *Leonicenus*, and *Minadous*, perceiving how exceedingly it had ſpred in a ſhort time, and ſo many ſuffering by it that were honeſt people, and that it was impoſſible it ſhould ſpread at that vaſt rate by one only way of *Coition* or Lechery, though all the people in the world had turned Whores and Whore-maſters, concluded, That it was a Diſeaſe, not only *Endemial* among the *Indians*, but really *Epidemical* in the Nations of *Europe*, and did make its own way among them, flying from place to place, after the myſterious manner of the Peſtilence and other Epidemical Contagious Diſeaſes: For, as it is noted by *Fracaſtorius*, it brake forth upon many of it ſelf, without the concurrence of common corporal Infection, which is recorded alſo by the laborious * *Zacutus*; and it ſerves to confirm (what I have ſufficiently proved in the former Chapter) not only that it ever was contagi-

* l. 2. de Contag.

* De Med. Prin. l. 1. Hiſt. 73.

ou-

ous at a diſtance, but that by the continued Succeſſion, Multiplication, and Concentration of ſo many Millions of *Contagious Ferments*, as have ſince been floating and flying up and down, it muſt needs be co-eſſentially tinctured and combined with the very Blood, Humors, Spirits, and, by conſequence, univerſally complicated, more or leſs, in all men, with all manner of Diſeaſes. And what is ſaid of this, relates alſo to its Compeer the *Scurvy*.

Moſt pat and pertinent to our purpoſe are thoſe Paſſages of the profound *Helmont*, which I ſhall here inſert, to manifeſt how much Diſeaſes are alter'd by the ſaid Complication. They are grown more myſtical and ſpiritual, than in former Ages, conſiſting leſs in matter, and more in *Ferment*, which Ferment is as it were the finer, the more ſubtile, ſublimated, and exalted part of Morbifick Matter, of a volatile, penetrative, communicative, and diffuſive Nature, ſtealing abroad inſenſibly, by flight from one to another, and ſo lays hold on and ſeats it ſelf in any Bodies, whoſe Natural Spirits aud Faculties are weak, and therefore unable to make good their

their ſtation againſt it. * *Oſwald Grembs*, that learned *Helmontian*, ſaith, this *Ferment* is the very ſame with *Hippocrates* his τὸ θεῖον, *quid divinum*, ſomewhat of a ſpiritual Nature in Diſeaſes, and paſſeth inconceivably after the manner of a Spirit. Therefore, *Helmont* himſelf, in one of his little * *Tracts*, affirms, That *Diſeaſes lead out their Armies againſt us, and act their Forces upon us* per ignorata ſeminaria, & initia inviſibilia, *by unknown Seminaries, and inviſible Beginnings.* And in the next page, he ſaith, *we have of later times had new Diſeaſes ſtarted up in the world, and the old ones do little ſuit with the names and deſcriptions given them by the Antients, becauſe they have put on other ſtrange Symptoms and Properties,* * *with which they walk diſguiſed, and deceive ſuch Phyſicians as think to cure Diſeaſes by following the Directions and Precepts of the Antients.* Their Age is rather to be envied than imitated; the happineſs was ſo great in their days, that as Diſeaſes were but few, ſo they were more ſimple, calm and gentle, were more eaſily tractable and curable, having none of thoſe odd Mixtures, Complications, and Diſguiſes,

* Lib. 2. cap. 1 de Morbis in genere. pag. 162.

* Ignotum Hoſpes Morbus, p. 405.

* Quibus larvati incedunt.

Diſguiſes, which latter Ages have ſeen, and yet we are ſo ſottiſh and pedaneous, as to tread only in their ſteps, and confine our ſelves to ſuch Definitions, Notions, and Medicins, as they have left us. * *In thoſe days* (ſaith he) *the natures of men were more ſtrong to reſiſt Diſeaſes; but now I find the Seeds* (or Ferments) *of Diſeaſes* gather ſtrength *every day, fall on more fierce, and become more hot and active, and that our Nature, the farther it goes, and the more diſorder'd it grows, the leſs it is obedient to remedies. Our Plagues increaſe daily, becauſe our Impieties are multiplied. Indeed, Diſeaſes are changed, diſguiſed, increaſed, and do degenerate, by reaſon of ſomewhat that is complicated with them; I am of opinion, that the* French Pox *having changed other diſeaſes, and brought them under its own Command, will have an Influence likewiſe upon the Peſtilence; yea, it is Tinctued by it already; Nor do old Diſeaſes anſwer any more to the Deſciptions of old Authors, nor yield obedience to their Remedies.* And page 847. he ſaith, *It hath infected every Corner of the world, and by its effect plainly ſhews, that it is creeping to a further ſcope, as yet unknown to the vulgar.*

*Tumultus Peſtil. P. 844,845.

It

It is not a Diſeaſe conſiſting of Matter, but is only a Venemous Ferment, affixed, like a ſubtile Scent or Odor, either to the ſolid, or liquid parts of our Bodies, and ſo (in a way peculiar to it ſelf) it incorporates not only with the Subſtantial Parts, but with the Excrements alſo, or Matters of other Diſeaſes, which it toucheth, becauſe it affects them, and is mingled with them. Hence it comes to paſs, that what perſons ſoever are either manifeſtly weak, or occultly inclined to Diſeaſes, they are eaſily ſeized by this Diſeaſe, and ſo it by Aſſociation transforms it ſelf into the various ſhapes of thoſe Diſeaſes. Wherefore Diſeaſes being thus degenerated ſince the time that the French Pox brake forth in the world, they do for the moſt part appear to have in them ſomewhat of a Venemous Nature; and no Man hath as yet ſufficiently inveſtigated the Cauſes of them, (as now conſtituted) *ſo that by this means moſt Diſeaſes are become Contagious, more cruel, more frequent, and more ſlowly and difficultly to be expelled, than in former times.* Thus plainly He: I wiſh his Language had been as plain in all other Particulars

Moreover, *Zacutus* putting the Queſtion

ſtion, * *Whether the French Diſeaſe may be complicated with all other Diſeaſes?* reſolves it in the Affirmative: *For* (ſaith he) *if it be an Univerſal Evil, we cannot deny, but it may be joyned with All, and it may happen many wayes; for, Diſtempers do unite with this* Lues, *either through likeneſs of the Matter, or in ſome other particular, as the Gout called* Arthritis, *pains of the limbs and outward parts, moiſt and cold Livers, Diſtempers of the Stomack and Spleen, from whence come Pains, Obſtructions, and very grievous Diſeaſes, as the Dropſie, Falling-Sickneſs, Stupor, Palſies, and others as tedious. Oftentimes alſo, this dreadful* Lues *is complicated with Acute Diſeaſes, as Fevers, Internal Inflammations, and the like.*------To the ſame ſenſe he ſpeaks alſo in his other * Volume, *That divers other Diſeaſes may be complicated with the* French, *is, beſides daily and long experience, affirmed by* John de Vigo *in his Treatiſe of it, and after him by that Learned Spaniard* Ludovicus Mercatus, l. 2. De Morb. Gall. *who have both of them very elegantly taught, that all ſorts of Diſeaſes, as well* Acute *as* Chronical, *may be complicated with the* French, *of which ſome have dyed quickly, others, in a lingring manner,*

* *Prax. Hiſtor. c. 1. De Morbo Gal. p. 66.*

* *Med. Princ. Hiſt. lib. 1. Quæſt. 35. p. 126.*

manner, according to the Nature of this cruel Diſeaſe. Many alſo have exchanged Life for Death, by violent Fevers, and Internal Inflammations, contracted only upon this Account, and other very Acute Diſtempers, ſpringing from this Root, as from their firſt Original. To which give me leave to add, what I by Experience know, that as this is the condition of moſt of the Fevers in this Age, by the Intermixture of the *Pockie Ferment*, or the *Scurvy*, or both united; ſo if a Phyſician hath not in his Head a right Notion of the knack of the Diſtemper in its complication, and admit he ſhould have a Judgement or right underſtanding of it, yet if he be not provided of neat Remedies fit for ſuch a Caſe, or knows not how to invent, there's an End of the Patient; for, the Fever ſhall not budge one foot, for all the Juleps and Cordials, till you hit him in the Root upon which he grows. So that I think, in our Diſcourſe concerning the variety of *Complications*, it may may do well if we lead the Van with Teſtimonies touching Fevers. * *Sennertus* ſaith, that if a Fever be complicate therewith, *the Cure becomes difficult.* Alſo, *Helmont*, in the place before cited,

* *De Lue Ven.* cap. 7.

ſpeaks home to this Point, ſhewing how the *French Ferment* is complicated with that grand Fever the *Peſtilence*, and attributes the frequency of the Peſtilence to the frequency of the other. *Without doubt* (ſaith he) *the Peſtilence is now more frequent than in former Ages; it ſeizeth us upon the leaſt occaſion, cruelly perſueth, and more eaſily ſpreads it ſelf, becauſe of its being aſſociated with this new Venom or Poyſon.*

Yea, he referrs to this the Original of the many ſtrange Malignant Fevers of this latter Age, ſo different from thoſe that were of old, which have ariſen not only in Towns, but *Field-Armies*, and *Sieges. For, of old great Armies were led up and down in* Europe, Aſia, *and* Africk, *without any notable Contagion, and their Muſters were commonly not much diminiſhed; but now, no ſooner is a Siege begun, but immediately the Beſieged die within, and the Beſiegers alſo without, by ſome ſtrange popular Peſt; and when the Siege is over, hardly a Company, or Troop, marches forth, but there follow Wagons laden with ſick men. Not long ſince, a Camp-Fever brake forth in an Army of ours, of a profound Contagion, killing men without*

Thirſt

Thirſt or Heat, which ſome would have attributed to the Impurities and Naſtineſſes of Camps, Mariſh grounds, Houſes, together with the neceſſities of the Souldiers, as the Cauſes of ſuch unuſual ſickneſſes; and ſo upon this ſuppoſal, Phyſicians manage the whole buſineſs of Curing; as if Camps had been more cleanlily kept of old, when ſuch ſtrange Peſts and unuſual Fevers were not ſeen among them. But I know, that as often as any Fever of the old ſtock doth befall a Body, that is actually under infection of the French Diſeaſe, or that formerly hath had it, but was ill cured; immediately the Fever aſſociates it ſelf with the Venemous Reliques (or lurking Ferments) *of that* French Lues, *and from it borroweth Poyſons, which produce that Fever called the Malignant and Camp-Fever; after which, the Contagion propagates it ſelf, even upon ſuch perſons as are free from the ſaid* French Lues; *and having the Fever as it were for its Father, and the* Lues *for its Mother, the new-born Monſter being a Mongrel begotten of two diſtinct Diſeaſes, ſtarts up a Third Thing different from both its Parents. Hence it comes to paſs, that as well Fevers as Peſtilences, march diſ-*

guiſed and unknown; for, the Lues *being lock'd within the feveriſh* Chaos *goes on to ſpread it ſelf along with it, and becomes Epidemical, to wit, this unluckie Monſter of the* Lues, *being unlike both its Parents, and a treacherous Venom, becomes like a Peſt, and renders the Peſtilence it ſelf, by adding a new putredinous Ferment, more cruel than it was wont to be.*

Certainly, never was more ſubſtantial Truth delivered by an Author in ſo few words; for, though this Nation (through Gods bleſſing) hath not been of late years puniſhed with the Peſtilence, as formerly; yet the Armies that have been marching throughout the late Wars, have ſufficiently felt the Fury of Malignant Fevers, of ſo different a Nature, that Fevers ariſing in ſome years have alwayes varied in Symptoms from thoſe that fell out in other years: Nor was it thus of late only in our Armies, but in our Towns, Cities, and Villages, and hath been ever ſince; yea, theſe 3. years laſt paſt, though no great numbers, compared with former years have been caſt down by Fevers, yet thoſe that have been (both Fevers and Small Pox) have been

been odd kind of Diſtempers, not reducible to any old Claſs of Fevers, and have alwayes puzled Phyſicians to deal with them. But this is no more than what agrees with the Account that is given of them by * *Sennertus*, who ſaith, They eſpecially *do periſh, who are ſeized by thoſe Malignant Fevers*, called Febres Gallicæ, *French Fevers, ſo termed, becauſe they are complicated with the French Pox; for, the Venereous Virulency corrupting the Humors, puts upon them a malignant quality, rendreth the Fever the more grievous, and debilitates alſo the Natural Heat, ſo that neither the Fever, nor that Maligne Diſeaſe, can be overcome by Nature.*

* *De Lue Ven. cap. 7.*

Nor is it with theſe dreadful Fevers alone that it is complicated, but with *Hectick Fevers* alſo. So ſaith that Author in the ſame place; *For, the Venereous Virulency it ſelf, and the Pains, want of Sleep, and other Symptoms, debilitate the Natural Heat, and hurt the Inſtruments of Nutrition, ſo that a Conſumption of the whole Body follows, conjoyned with a ſlow putrid Fever cauſed by vitious corrupted Humors.* And upon this File you may hang moſt of thoſe that are reckoned (as Mr *Graunt* ſaith) to die of a *Conſumption*,

ſumption, in the Weekly Bils of Mortality. And I remember, that *Septalius*, in his *Animadverſions* for the Cure of ſuch perſons, preſcribes a Broth made of Veal and Sarſaparilla: a reaſonable Remedy, becauſe founded upon a right Notion, but alaſs too too ſhort of power to reach the Buſineſs now. I could (if I liſt) be copious in Allegations out of Authors touching this *French Hectick*, but I am willing to ſhorten.

This *French Sprite*, called *Lues Venerea*, haunts not only the Inward Parts of Men, but the Outward alſo, appearing in the form of *Ulcers*, (as *Helmont* ſhews) *Puſtles, hard Bumps in the Fleſh, Inflamed Tumors, purulent Apoſtems; as alſo renders wounds hard to be cured, inſomuch that the beſt Chirurgians do complain, with admiration, that of late even the ſleighter wounds will hardly yield to the uſual Remedies*, ſo that there is need of a new Foundation for Surgery as well as Phyſick. 'Tis too true of *wounds*, but eſpecially of Ulcers in the main Body, yea and trivial red pimples in the Face, (as I have frequently obſerved) that the old Medicines will do no good on them, by reaſon of either the *Venereous*, or the *Scorbutick Ferment*,

P. 845. 847.

Ferment, or both, latent in them. At this Inſtant, while I am writing, I have a Patient with an Ulcer, that was before handled by one in the old way, to no purpoſe, nor do I reckon I ſhall do any good with it but by Anti-ſcorbutick Remedies. In the year 1661. I my ſelf had a hot fiery *Impetigo*, which ran through my Beard round like a red Half-Moon from one Ear to the other; and, after all manner of Unguents, Waters, Lotions, *&c.* uſed for 12. months in vain, I deviſed a Scorbutick Liquor, & infuſed in it a certain Mercurial Powder; which, only by wetting the part therewith ſleightly with the top of my Finger, twice a day, took it inſtantly away; and I uſe that Infuſion with the like ſucceſs to other People ever ſince, who cannot be cured by any other means but ſuch a one as this, which oppoſeth and ſtrangleth thoſe ill Ferments in the Cutaneous Parts, whereever it finds them. The like may be made for Waſhes, to recover the flouriſhing colour of the Face, and reſtore Hair on the Head in the room of that which is fallen; a Blemiſh to which both Men & Women are too ſubject in this Venereous Scorbutick Age. To ſuch Outward Maladies,

Helmont adds also Inward, and saith, *This French P. hath brought forth also new Palsies, new Gouts, Jaundies, Dropsies, and many more.* And this deceived *Paracelsus*, who thought the *French P.* was of it self no Disease, because in his dayes he found it united with other Diseases.

P. 847.

* De Lue Ven. cap. 7.

* *Sennertus* likewise reckons up a great many of Diseases that it passeth under; as besides the External, the Internal, *viz.* when it puts on a form of those Diseases which befall the Heart, then it quickly kills people; in those of the Brain, it is slower; in those of other Parts, it is slowest; and the Venom *will lurk there* (he saith) *and, though it seem extinct, will shew it self after thirty years time.* It will act all the Diseases of Stomack, Liver, and Spleen. It will appear in a *Head-ach*, *Vertigo*, *Falling-sickness*, *Catarrhs* and *Distillations* of all sorts, strange Arthritical pains, the Diseases of the Lungs, and of the Womb, and all manner of Fluxes. So far He. And his Testimony is *Instar omnium*, because he is a Collector of the Sense of most other Authors of Note, to which he hath added his own Knowledge and Experience.

Nor doth it fare thus with Diseases in regard

regard of the *Pox* only, but the like pranks are played alſo by the *Scurvy*. *Helmont* * tells us, that this Diſeaſe hath had a ſtroke likewiſe in Production of the ſtrange Fevers both in Camps and Cities; and that ſuch a Contagious Malady brake forth in the *Low-Countries*, the very ſame year that the *Scurvy* firſt appeared in the world. His Abbreviator, * *Oſwald Grembs*, ſaith likewiſe of the *Hectick Fever*, that it is united with the *Scurvy*, *it ariſing frequently from Scorbutick Matter, and ſo requires another manner of Cure, than the Conſumptive Hectick of the Ancients*, And quite contrary thereto; that is to ſay, *not with Moiſtning Remedies, but rather ſuch as will cut and attenuate the Offending Matter, and conſume the putrid Exhalations.* This I ſee confirmed by daily Experience.

* P. 848.

* Lib. 1. cap. 2. De Febr. Natur.

* *Sennertus* in his Tract *de Scorbuto* concerning the *Scurvy*, ſhews how it is gotten into all manner of *Fevers*, and Agues, from the Camp to the Cottage; ſo that, he ſaith, he who will cure them in this Age, muſt not have recourſe to *the Doctrins and Symptoms ſet down by old Authors, nor make a Judgment of them from*

* Cap. 4.

from the number of Days and Fits, but by the propriety of their Signs: For both in reſpect of Heat, Cold, Duration, and the rare Evils and Symptoms attending them, which are not to be heard of among the Antients, there is a vaſt difference betwixt theſe and the old Fevers and Agues. He is very large in this; but I muſt make haſte, and only tell you that * *Horſtius* ſaith the like, alſo *Foreſtus*, and *Eugalenus*; this laſt man firſt opened the eyes of the world about this matter, and all agree, that new wayes of Cure muſt be found out for moſt Diſeaſes, becauſe of the *Scorbutick Complication*, as well as the *Venereous*. Yea * *Horſtius* ſaith thus, Eugalenus *Scorbutum omnium Morborum quaſi Materiam Primam eſſe contendit*, i. e. Eugalenus *affirms the Scurvy to be as it were the* Materia Prima *of all Diſeaſes, & the ſame* (ſaith *Horſtius*) *is by* Hercules Saxonia, *in his Lectures and Conſultations, avowed concerning the French Pox*; ſo that the world ſince the days of thoſe Authors, (ſome of which lived near 100. years ago) muſt needs be brought by this time to a fine Paſs. Thoſe Two prodigious Maladies combining together to complicate themſelves

* l. 7. de Morb. Contag. P. 374.

* Ibid. P. 387.

ſelves with all other Diſeaſes, have now, in proceſs of time, by reaſon of their contagious quality, ſo inſinuated themſelves, that they are become univerſal, a part of our Humane Nature, and conſequently inſeparable from us, as well as from our Diſeaſes. Yea more than this, they have ſo ordered the matter, that they have quite loſt themſelves within us; theſe two are become other things than they were when they firſt ſtarted up, in the appearance of *Simple Pox* and *Simple Scurvy*; but ſince that time, by being Compounded with each other, they loſe their own primitive ſimplicity, and a *Third Monſter* is ſtarted out of them, which we know not what to call; but, like the old Serpent, it hath twined it ſelf with our corrupted Nature, and winding and turning it ſelf in various Forms, it ſtings many to death inviſibly, and poyſons the reſt of the world with new Ferments, working up one after another, and producing ſtrange unheard of Infirmities, year after year: ſo that the *Pox* and *Scurvy* thus propagated, are not wont to appear in their own Colours, nor with the common Symptoms, which follow the one when

'tis

'tis contracted by Coition, and the other when 'tis gotten by ill Diet, ill Drinks, ill Airs, *&c.* Alledge not, that you have nothing of the *Pox*, none of the *Pockie Ferment* within you, becauſe you never had the uſual Signs, as a Gonorrhæa, Bubo's, Ulcers, and the like, which are the uſual Formalities of the Pox; nor be you over-confident, that you have nothing of the Scurvy, none of the *Scorbutick Ferment*, becauſe you have no looſe Teeth, nor rotten Gums, *&c.* which are the common reputed Signs; Alas, theſe two Ferments, whether they go joyntly or ſeparately, do put on other Formalities, and diſguiſe themſelves in the habit of other Diſeaſes, according to the inclinations of ſuch weakly Bodies as they light upon. *Guil. Romanus*, a German Doctor, in an Epiſtle of his recorded by * *Horſtius*, reproves another Doctor, that adviſed with him about the Caſe of a certain Patient, becauſe he would not allow the Caſe to be *Scorbutick*, willing him not to be miſled by the low Notions of common Practiſers, who alledging that the Patient had no ſore Mouth, no looſneſs of Teeth, no rotting of Gums, nor Spots in the Body, nor

* l. 7. *de Morb. Contag.* p. 394.

nor loſs of lively ruddy Countenance, therefore concluded the Diſeaſe was not the *Scurvy*; *this ſuits* * (ſaith he) *with the vain Conceits of vulgar Phyſicians*; and he there ſhews, the Caſe may be Scorbutick, and yet not one of the common Symptoms of the Scurvy appear in the Buſineſs——.In a word, for the right underſtanding of my Driſt in this Diſourſe, conſider, that I diſtinguiſh betwixt the Tinctures or *Ferments* of thoſe two grand Diſeaſes, and the Diſeaſes themſelves: The Diſeaſes ſometimes appear like themſelves, when they are gotten in the common way; but when the *Ferments* propagate themſelves, either by *Lactation*, or *Hereditary Propagation*, or by *Contagion*, they ſeldom or never appear like branches of ſuch a Stock; but being Tinctured in the Blood and Humors of Bodies do paſs into the Forms of ſuch Diſeaſes, as thoſe Bodies which receive them are moſt inclinable to; and ſuch Diſeaſes, whatever they in common ſenſe and outward appearance ſeem to be, are never cured by the Medicins uſually applied againſt them, but by ſuch Remedies only, as either totally alter or extirpate the *Ferments*,

* *Nugæ ſunt, & inceptia vulgarium.*

ments, which are complicated with, or Tinctured in them. And therefore, 'tis well noted by * *Sennertus* in his Advi-
* Cap. 7. so's about the *Pox*, that when 'tis gotten in the usual way of *Coition*, it is the more easily cured; but very hardly when 'tis gotten by *Suckling*, or by *Hereditary Propagation*; for then, 'tis not so much the *Pox*, as a *Pockie Ferment*, and (as he saith) is hardest of all to be cured. The like holds also concerning the *Scurvy* and the *Scorbutick Ferment*. And thus I have been as plain in my style and language as I could be, in describing so mysterious and abstruse a Matter.

I might enlarge by naming particular Diseases, to manifest the vast extent of the *Scurvy*'s Complication with all other Maladies, and make Inferences thereupon of the necessity of new Notions and new Medicins; but that being done to my hand by the long Catalogues of Scorbutick Diseases, recorded by *Sennertus*, and before him by *Horstius*, and before him by *Engalenus*; I think fit to referr you to the Authors themselves, this Treatise being already mounted to a greater Size than I intended. The com-

commonneſs of ſuch a Complication will hardly be denied by any man that is a Phyſician; therefore I think 'tis enough that I have touched upon the manner of it, and made it (I conceive) a little more eaſie to be underſtood and believed, than hath been done by any one before me.

CHAP. V.

An Inquiry into the Alteration of the Nature of Diſeaſes, in reference to Vermination *or Breeding of Worms.*

THat *Worms* are, and may be generated of ſome bigneſs, and of ſeveral ſhapes, not only in the Bowels, but in every other part of the Bodie, is a matter ſo obvious in every Author of Note, and by continual Obſervation, that I ſuppoſe, none will deny it: and that they are in theſe days more frequently appearing in all manner of Fevers, and other Diſeaſes, than in former time, is by experience ſeen, and there is reaſon for

for it, becauſe by the intermixture of *Pockie* and *Scorbutick Ferments*, humors are more vitiated, and a more poyſonous putredinous Diſpoſition or Corruption is introduced into mens Bodies, than was wont to be in elder time. In the years 1660. and 1661. (as I have hinted in my ſecond Chapter) there raged in the Country a Malign Fever, and I my ſelf found worms coming from all people of all Ages from two years old to 70. of both Sexes; for I ſo ordered Juleps and other means, that I ſtill mingled ſuch Remedies with them, as might kill Worms, or alter the Wormatick matter which abounded within the ſick every where; This I then began to do, and have done it ever ſince; not only in *Fevers*, but I mingle ſuch Remedies conſtantly in all other Caſes, and do find Worms frequently brought away from People in years, as well as the younger Fry: Therefore this Scope I continually propound to my ſelf, and commend to others that they ſtrike at Worms, and be continually deviſing Remedies which may ſuit with the main Diſeaſe, (let it be what it will); and withall alter the Wormatick Matter, if there

there ſhould be no Worms to kill; for, this I find, that though the matter do not ſometimes breed the Animals, yet as long as the Wormatick Cadaverous Humor and Matter remains in being, within the Body, ſo long the Body languiſheth, and ſometimes will have all the Symptoms that attend Worms actually exiſtent; and no cure of the Main Diſeaſe, with which 'tis complicated, will go forward, till that Verminous Humor or Matter be extinguiſhed or removed: which being done, and the Cure wrought by mingling Anti-verminous Medicins with the other, I thereupon conclude, a matter near of kin to the Worms was A Con-cauſe (if not the only Cauſe many times) of the Diſeaſe, though I ſee no Worms actually come away.

This is a Courſe that had its riſe firſt from my own private Speculation; for, though others have written of a Complication of Worms with other Maladies, yet none ever took notice of it as ſo general a Buſineſs. And if others will take to the putting of it in practiſe, by providing themſelves with various

Remedies of that Nature, fit to be mingled with other, in Diſeaſes either Acute or Chronical, they will find the ſucceſs exceed their expectation.

But ſince the time that I firſt entertained this Conception, I have met with a Book, which, though it cannot confirm me more in Judgement, than I am confirmed already by my own Practiſe; yet it pleaſeth me to ſee a Notion concerning Worms more finely improved, than ever I thought of before: The Author of it is * *Kircherus*, the Famous Jeſuite, now living at *Rome*, and 'tis highly commended by the two greateſt Phyſicians of *Italy*, (as I intimated in one of the foregoing Chapters) by Name *Sinibaldi*, preſent Publick Profeſſor of Phyſick in the Univerſity at *Rome*, and *Paul Zacchias*, now chief Phyſician to the Pope and his Court, with whom the Learned Jeſuit communicated his Papers before he put them in Print, and they reviſed them; ſo that what is ſaid in that Book, is the Senſe of three Men, known by their Learned Works throughout *Europe*. I find by the Date of the Epiſtle Dedicatory to the Pope, that

* *De Peſte*

that it was written in the year 1658. and was ſince Printed at *Leipſick*, an Univerſity in the Elector of *Saxonie's* Country, with a Preface to it prefixed by *Chriſtianus Langius*, Publick Profeſſor of Phyſick in that Univerſity, whoſe Name I have once before had occaſion to mention; but the Book came not to my Hand till laſt year. He exhorts the Phyſicians of *Leipſick* to follow the example of *Kircherus*, by aſpiring after Notions more ſublime, than what are to be found in the common Doctrines of Philoſophy and Phyſick, and ſaith, *Thereupon they will acknowledge that Man born to open the Eyes of Philoſophers and Phyſicians, who err and go aſtray.*

The Deſign of this Book is, to treat of the *Peſtilence*, its Original, Cauſes, Signes, and Cure; The occaſion of his writing was the ſtrange Nature of the Peſtilence which raged at *Naples* and *Genoa*, Anno 1656. and from thence flew to *Rome*; the Symptoms whereof were ſuch as agreed not with the old Deſcriptions, and baffled all the old Antidotes and Cordials, and puzled the Phyſicians in all their Conſultations about the Cauſes

and Cure of it: Which *Kircherus* conſidering, and pondering various Cauſes, at length he pitched upon thoſe *Effluviums*, *Atoms*, *Corpuſcles*, or *Ferments*, which (in the ſame ſenſe that I have deſcribed them in the Third Chapter) do continually flow forth of all groſs Bodies through the Air, whereby even the ſaid groſs Bodies do touch and take with one another, according as they are capable to receive Impreſſions from each other, through the working and counter-working of theſe Intermedial flitting Atoms or Bodikins, which when they iſſue from Contagious Bodies, impart ſomewhat of their own Natural Venom, and improve it, whereſoever they fix; and He thereupon concluded, that ſome ſuch little inviſible contagious bodies as theſe, carried through the Air, and inſinuating themſelves into the Bodies of Men, did, by their pernicious Ferment, induce a putredinous peſtilent diſpoſition in the Humors, and conſequently, the Peſtilence it ſelf, where Nature had not ſtrength enough to oppoſe and hinder the operation of its Fermental Force and Power.

This

This is no other Doctrine than what I have aſſerted before, in maintaining the like manner of propagation of the *Pockie* and *Scorbutick* Ferment; and there is a parity of reaſon for the like propagating of theſe Contagions, as for the Peſtilential, becauſe the *Ferments* of Diſeaſes are by *Helmont*, *Horſtius*, *Sennertus*, and others, rightly termed, *Seminia*, *Seminalia*, *Seminaria*, Seminaries and Seminals, in regard they carry along with them the Seeds of the Infection of thoſe Infected Bodies from whence they flow; and, whereſoever they lodge, they are like ſeeds ſown, which hath in it a hidden power to produce its own like, and ſo they beget a Diſeaſe of the ſame kind with that which was their own Original, be it either Peſtilential, Pockie, or Scorbutick.-----But that which moſt remarkably touches the Point in hand, is, that he introduceth a new *Paradox*, (as himſelf calls it) into the world, *viz.* That the Contagion of the Peſtilence was at that time conveyed abroad, not only by the volatility of ſuch Effluviums, Atoms, and Corpuſcles, as are *Inanimate*, but by ſuch alſo as were *Animated*, living Crea-

tures, and were a ſort of *Inviſible Worms* or Vermicles. This might ſeem ſtrange at the firſt Report, and not to be believed, unleſs that which is not to be perceived commonly by Sight, may by help of Art be preſented to the Eye, and then there is no diſputing againſt Senſe. This that Author undertakes to do, (of which more by and by) and ſaith, * *That theſe Animated Effluviums are conſtituted of indiſcernable Animated Corpuſcles, it doth appear by the multitude of Worms which are wont to iſſue out of one and the ſame Body; of which ſome are ſo big that they are preſently ſeen, the reſt remain in an undiſcernable ſtate of Magnitude, yet multiplyed in ſo great a number, as the numberleſs Corpuſcles or Particles are, of which the* Effluvium *doth conſiſt; and being exceeding ſubtile, thin, and light, they plie to and fro, no otherwiſe than Atoms do, with the leaſt puff or motion of the Air:* And he ſaith, Theſe Worms are ſo fine, *that they inſinuate themſelves, not only into Clothes, Ropes, and Linen, but into other Bodies leſs Porous, as Cork, Wood, Bones; yea, into thoſe which are leaſt Porous and moſt compact, as metals, money,* &c. Of this

* P. 81.

this he in * another place tells us, they *had daily Experience* in the Plague-time, at *Naples* and *Rome*, where no money was received in Payment, *but what was firſt well ſoaked and waſhed in Vinegar, if it came from any Infected Place*; and he believed, nothing could reſiſt the penetration *but Diamonds only, becauſe of their poliſhed Superficies, and unconquerable hardneſs.* By ſuch *Animated Effluviums* as theſe, *Cardan* ſaith, the great Plague that fell out in his time at *Milan* was raiſed, which unpeopled that great City, *not only the Air being filled with them,* * *but the very duſt of the Earth animated into ſuch kind of Vermicles.*

* Pag. 250.

Lib. De Venen.

* P. 85.

Georgius Agricola tells *that in his time, a Plague came by eating of Fruits, Pears, Prunes,* &c. *ſo that the eaters dyed in few dayes after; which Fruits ſwarmed with multitudes of indiſcernable Worms: which were no other than the Animated Corpuſcles or Particles flowing from Contagious Carcaſes, and faſtning upon Trees and Plants, being carried thither through the Air. In the late Peſt likewiſe at* Naples, *many were infected and dyed preſently after eating of Fruits:* The uſe whereof muſt

needs be hazardous in Infectious Seaſons, eſpecially ſuch Fruits as are corruptible of their own accord.

He is much more copious in Diſcourſe about this, but I will contract him, as well as I can. *Some will object, that if this were ſo, then by theſe Animated Effluviums or Vermicles, being blown by winds from one place to another, the whole world would ſoon be ruined by Contagion. I anſwer; that this is not wont to be, by reaſon of the divers and diſproportionate Situations of Countries, with their various Natures, Tempers, and Properties, and the divers Conſtitution of winds and Airs prevailing within them.*

Thus we ſee, in the ſame City or Country, the Peſt uſually declines with the Seaſon of the year, becauſe of the Alteration of the Air, *&c.* In cooler Airs, theſe *Animated Effluviums* or Vermicles, can neither ſwarm nor live. But if you would know, how theſe Vermicles come to be made viſible, which are of ſo minute a Magnitude, and ſo ſubtil a Subſtance; the ſame Author tells us, the viſibiliy is attained by

by the Inſtrument called a * *Microſcope. Theſe things* (ſaith he) *may perhaps ſeem Paradoxes to the Reader, but when he ſhall, as I have done, by Experiments made the ſpace of many years, by the help of moſt exquiſite Microſcopes, throughly ſee with his own Eyes, then I ſuppoſe, he will not only believe theſe things to be ſo, but inſtructed by Experience, be ready to atteſt the Truth of what I have ſaid.*

* *i. e.* An Inſtrument ſo made, and fitted with glaſſes at each end, as that the ſmalleſt thing will be repreſented by it in ſo conſiderable a bigneſs, that the frame and compoſure of its Parts may be diſcerned.

Now, as the certainty of theſe things is by him alledged, in reference to the propagation of that grand Evil the Peſtilence, there can no Reaſon be given why we ſhould not have an Eye upon a *Verminous Diſpoſition* in all manner of Diſeaſes whatſoever: If inviſible Corpuſcles, Atoms, or Particles, may be vivified on this manner, and be conveyed at a diſtance from place to place, and from a ſick perſon to a ſound, or from putrid Carcaſes to living and luſty, ſo as to beget a Verminous Diſpoſition within them, I ſuppoſe 'tis more eaſie to conceive, that within the ſame Body, wherein (be it through intemperance, or by any ſort of Contagion) a putredinous Matter (Blood or Humor) is prepared,

not

not onely the groſſer part of the Matter maybe enlivened into the greater ſort of Worms, but alſo the Salient Corpuſcles, friſking Atoms, or active Particles therein contained, may be very often (if not continually) quickned into ſuch Inviſible Animals or Vermicles; and, as ſuch, lurk in the Blood and Humors of the Body, and become the occaſion of many ſtrange Diſeaſes both Acute and Chronical, which we are wont to attribute unto ſome other Cauſe.

The learned Author gives ſo much Light to this as hath convinced me, by manifold *Experiments*, which becauſe they are the beſt kind of Arguments; and the clearing of this being of very great importance to the practice of Phyſick, I will ſet down all, but make them as ſhort as I can. Before he comes to *Experiments*, he lays down this for a Poſition; *Omne Putridum, exſe & ſuâ Naturâ generare Vermes:* i. e. *That every thing which is Putrid, doth of it ſelf, and by its own Nature, generate Worms:* whereupon he thus reaſoneth. *Whereas all generation conſiſts in what is hot and moiſt, according to the Philoſopher's determination,*

*mination, a twofold Corruption may here be conſidered; the one Natural, the other ſpecially adventitious or beſide Nature, which properly is wont to be called Putrefaction. I ſay therefore, that there is no living thing which is not lyable to Putrefaction, even as the * Philoſopher himſelf affirms. For the underſtanding whereof, it is to be noted, that no living thing can be generated out of what is formally Putrid. But whenas that which is putrefied, being a mixt Body, is, by ſeparation of impure parts from the pure, reſolved into its own Elements, and whereas the pure Parts natural to the mixt Body being mingled with the putrid, are agitated by heat; and foraſmuch as Nature always intends the beſt, hence it comes to paſs, that the external heat works the prepared matter, not into any thing that is of an Excrementitious Nature, but thruſts forth the purer Parts of the Mixt Body into ſomewhat that is animated; and this is the only Cauſe of the Original of Animals out of Putrefaction. Moreover, whereas Philoſophers are wont commonly to ſay, that ſome Animals are generated out of meer Putrefaction alone, that is true, if we conceive the whole*

* *Ariſt. 2. de Hiſt. Anim.*

whole putrefaction of a mixt Body to be performed under one Action, but becauſe no mixt Body is ſo corrupted, but that ſome of the purer Parts natural to it do remain; therefore when theſe purer Parts become Tinctured with in an ill fuliginous quality through the putrefying of the Excrementitious Parts, hence it falls out, that the ſaid purer Parts being agitated by external heat, do thruſt forth an Off-ſpring of Animals, of the ſame Nature with the Excrementitious Parts which gave the Tincture. So much for his Philoſophy of the Buſineſs: Now for the *Experiments.*

We ſee, that the Earth, out of I know not what Putredinous Matter in its own Bowels, doth produce not only Inſects of all ſorts, but alſo various Monſters of Venemous Creatures, as Serpents, Toads, Dragons, in Dens and Caves of Mountains, which have their original from moiſture and a various mixture of virulent Dregs and Slime; and the like are produced out of Ponds, Lakes, and Mariſhes, by the heat of the ambient Air working upon a Conflux of Terreſtrial Parts. Yea, Water it ſelf kept in a cloſe Veſſel, and expoſed to the Sun, is quick-

ly

ly animated into Worms, as is ſeen by daily Experience, both in Voyages at Sea, and within the walls of our own private Houſes. Who knows not, that Worms ariſe from putrefaction out of corrupted Nutriment within the bowels of Men's Bodies? And the like from corrupt humors creeping betwixt the ſkin, ſo that the whole Body becomes animated by little and little, as in the Louſie Diſeaſe called *Phthiriaſis*?

Again, there is no kind of Plant which doth not out of ſlime or mucous Matter, generate a certain Worm peculiar to it ſelf; which ſecret is in theſe laſt Times diſcovered by the *Microſcope*, and will be more experimented. Yea, Vinegar, Milk, the Blood of men in Fevers, are perceived to be full of Worms, although not to be diſcerned by an eye that is not armed with that Inſtrument.

In the Carcaſes of Men and Brutes, that wonderful Efficacy of Putrefaction in generating Worms doth very much appear: which being taught abundantly by *Ariſtotle*, *Theophraſtus*, and *Pliny*, and known to the Vulgar, I ſhall not inſiſt upon.

Ariſt. 4. de gen. c. 26. *Theophr. l. 4. c. 27.* *Plin. l. 11. c. 34.*

Moreover,

Moreover, Water elevated by Vapor, Air, Hail, and Snow, are full of Worms. *Pliny* ſaith ſo of Snow, in his Book *de Divinis Nat. Charact.* And *Cornelius Gemma* of Hail *in lib. de Arte Metallicâ.* As much is ſaid of Air by *Georgius Agricola*; and the ſudden generation of Worms, Frogs, and Inſects (which have come down with rain upon the earth) doth confirm it. There is alſo ſcarce a Stick, or Fruit, or any other mixt Body, which doth not produce ſome Animal which diſpoſeth that to Deſtruction which begat it, according to that of *Lucretius*,

——— *obnoxia cuncta putrori*
Corpora, putrores Inſecta animata ſequuntur.

All Bodies are ſubject to Putrefaction, and out of Putrefaction ſpring Animals. And that Worms of bigneſs viſible ariſe out of putrid Bodies, is a matter known to All; but that all putrid Bodies ſhould abound with an innumerable Swarm of Worms not to be perceived by the eye of it ſelf, is a matter that was

was never known till the admired Invention of the *Microſcope:* which I my ſelf could never have believed, unleſs I had found it true by many years experience. Therefore, that the Reader may more fully behold the admirable power of Nature, what hath been hitherto ſaid, may be manifeſted by irrefragable Experiments, as followeth.

Experiment I.

Take a Piece of Fleſh, and expoſe it by night to the moiſture of the Moon till early the next morning, then view it diligently with a *Microſcope*, and you ſhall find, that all the Putrefaction contracted by the Moon is degenerated into innumerable Vermicles differing in bigneſs, but when you remove the *Microſcope*, you cannot diſcern any by the quickeſt of your eyes, unleſs perhaps ſome few be among them that are grown to a ſenſible magnitude. You may try the ſame in Cheeſe, Milk, Vinegar, and the like Bodies abounding with Putrefaction. Yet think not 'tis to be

be done by every ſlight *Microſcope*, but one made by a diligent and ſkilful hand; ſuch a one as I have, which repreſents Objects a thouſand times bigger than they are in themſelves.

Experiment II.

If you take a Serpent cut into ſmall pieces, and putting it into rain-water, expoſe it for ſome days to the Sun, then bury it in the Earth for the ſpace of a day and night, and afterwards taking out the parts grown flaccid with putrefaction, ſhall examine them with a *Microſcope*, you will find all that's putrefied ſwarming with ſo great a Multitude of little ſpringing Serpents, that no man, though he have the eyes of *Lynceus*, can number them: which Experiments may be performed with all kinds of Serpents; and ſometimes in dead putrefied Serpents you will find ſome of them diſcernible by the Eye alone.

Experi-

Experiment III.

Matthiolus, *Fuchſius*, and many other Herbariſts, declare, that Sage unwaſh't is very hurtful to ſuch as eat it; yea, *Mizaldus* ſaith, that ſome by eating it have immediately fallen down dead: The Cauſe they impute to I know not what Toads poyſoning the roots with their breath. But as for me, I have diſcovered another Cauſe of this Matter; for, while I examined more curiouſly the conſtitution of this Plant, by the help of my Microſcope, at length I obſerved in thoſe leaves which were more rough than the reſt, that their whole Superficies was covered with ſomewhat like a Spider's Web, within which appear'd Animals exceeding ſmall, and which were perpetually at work therein, and certain round Things as it were Eggs were ſpred upon the Superficies, which as it is doubtleſs a certain Breed or Spawn of that ſort of petit Animals, ſo by their virulent humor they may do a man a deal of miſchief: But wipe a leaf with your finger, or waſh it with water, and they all preſently diſappear;

from whence I collect the true cauſe of the pernicious quality of Sage that is not waſhed——.Moreover, if you make Experiment in other Herbs, you will to your very great admiration find, there is no Herb, out of whoſe moiſture or putrid *Mucor* ſome Inſect doth not ſpring, which ſhews it ſelf at firſt in the form of a very little worm, a little after it acquires wings, and is transformed into a Butterfly, or ſome other flying Inſect, according to the condition of the Herb or Plant; all which I having found true by frequent Experiment, others alſo may be ſatisfied that will make trial of the matter.

Experiment IV.

If with the Microſcope you examine the powder of any rotten wood whatſoever, you will find a prodigious number of Vermicles, ſome armed with Horns, ſome ſet out as it were with Wings, and others not unlike thoſe Worms that have many Feet; their Eyes alſo you will diſcern like black Points, and that they have a long

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Snout; ſo that it may appear, Almighty God hath manifeſted his own wonderful Power, not only in the greateſt Bodies of the World, but in the ſmalleſt, even in thoſe Animals that are not to be diſcerned by the ſharpeſt ſight, having furniſhed every one of them with ſuch Members, as without which they could neither move themſelves, nor exerciſe any vital Actions. What a little Liver, little Stomack, little Heart, little Nerves, and Griſtles, muſt there go to the making of ſuch inviſible Corpuſcles! The leaſt Creature that we can ſee without the the help of Art, is a Mite, it reſembling a little white *Punctum* or Point, but view it with a Microſcope, and it appears to us a rough hairy Creature, like a Bear.

Experiment V.

Take a Glaſs-Vial half-filled with Water, into which ſprinkle ſome duſt of the Earth, which will preſently ſink to the bottom; and ſo expoſing the Vial to the Sun in the Summer time for ſome dayes, let it reſt without ſhaking, until

the Water begin to putrifie; and when the Water doth begin to putrifie, obſerve the bottome of the Vial, there will ariſe out of the ſetling of the water or injected duſt, certain little round bubbles, every one of which in the following dayes will be animated into very little Worms or Vermicles, which will ſtrangely friſk and ſport up and down in the midſt of the Water; and being come to Maturity, at length they betake themſelves to the top of the Water, and there being in great numbers transformed into winged Gnats, they commit themſelves to the Air, and become as troubleſome to Men and Beaſts in the Summer, eſpecially by night, as others uſe to be.

Experiment VI

Every Living Creature out of its own putrefaction educeth ſome kind of Animal, agreeable to its own Nature, and different from all others, which as I have by Experiment found true in ſeveral ſorts of Herbs, and may be ſeen by Corn animated into winged Animals; ſo

ſo it holds moſt certain in Animals, as well perfect as imperfect. The Carcaſe of an Ox becomes animated into Bees; Horſes, both living and dead, generate Waſps and Scarabees. Men do breed Nits, Lice, Fleas; the like do ſome Brutes alſo. Man's rotten Carcaſe becomes a Seminary of Worms. Inſects putrefied generate Animals of Nature like unto themſelves. Nature is ſo ſollicitous about promoting the Generations of Things, that whereſoever She finds a Diſpoſition, that is, heat with a due proportion of moiſture, there She immediately thruſts forth an Animal. I could here produce innumerable Inſtances from all ſorts of Living Things, but becauſe theſe are enough for the proof of what I intend, I ſhall no longer inſiſt on them. Only this one thing I avow, that all Putrefaction hath certain Seminals or Seeds within it ſelf for the Generation of Animals, which being excited by external and convenient Heat, do break forth into the aforeſaid *Colluvies* of Worms, ſo much the more pernicious as the putrefaction is more virulent.

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The Inference.

From this new Doctrine, eſtabliſhed by Demonſtration of irrefragable Experiments, it clearly appears, that moſt of the odd Diſeaſes of a Malignant Nature, and which Phyſicans know not what to make of, do for the moſt part depend upou a certain virulent and ſtrange putrefaction, which being animated by time, as it degenerates into a certain verminous and indiſcernable Generation of Worms, ſo alſo they occaſion a ſtrange *Cataſtaſis* of unuſual Exotick Symptoms, the Cauſes whereof Phyſicians cannot aſſign: For, as there is no ſort of Meat which is not ſubject to ſuch a wormatick production; ſo in the Body of Man there is no Veſſel belonging to Vital Operation, which is not ſometimes affected therewith. *Hollerius* tels us of a Scorpion bred in the Brain; alſo of a Man whom he diſſected after Death, and found a world of Worms in his Liver, which were the Cauſe of his unknown Diſeaſe. Turn over the Volumes which give us the Hiſtorical

ſtorical Part of Phyſick, and you will find Examples of Worms, not only in the principal Parts of Man's Body, as the Heart, Liver, Brain, Lungs, Reins, Spleen, Bladder, Stomack, *&c.* but in thoſe Chanels of the Blood, the Veins, and Arteries. For, whereas, by the unanimous Conſent of Phyſicians, the Cauſe of all Diſeaſes is ſaid to be a certain putrefaction ſecretly lurking among the hidden receſſes of the Humors; and whereas all putrefaction upon the next opportunity produceth Worms not to be diſcerned by the Senſes; and ſeeing that according to the various diſtemper of Humors, Putrefaction acquireth Venoms of divers Natures, and divers powers in working, according to the various manner of combination of Malignant Humors, even ſuch a variety of Powers alſo the Animals from thence ſpringing muſt needs acquire, and become ſo much the more pernicious, by how much a Poyſon or Venom that is Animated is more violent than that which is Inanimate: And ſo it falls out, that this Animated or Wormatick Venom being diſſemi-

ſeminated by little and little, firſt infects the Maſs of Humors, then creeping on gnaws the Bowels, and diſperſing its Poyſon through the inmoſt Fibres of the Body, doth, with moſt horrible Fits and Symptoms, diſpoſe a man by degrees toward his long Home. Hence it is, that Phyſicians perceiving ſuch effects fall out beſide the Courſe of Nature, as are little leſs than prodigious, in the exotick conſtitution of ſome Diſeaſes, they admire what the Matter is, and try all Experiments; and ſo the Apothecarie's Shops are well nigh emptied of Medicins, and yet no hope of procuring health, whereas if they did rightly apprehend the nature of the lurking Enemy, perhaps they might by appropriate Remedies reſtore the Patient: But few do imagine, that we carry about with us an Off-ſping of Animals begotten out of our own Blood and Bowels, ofſo great a contumacy, that if you overthrow their Auxiliary Forces in one place, you will find them immediatly recruited in another.

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Moreover, that there may be a more full evidence of this Truth, ſo neceſſary to be known, the aforeſaid Author ſaith, * he hath with his *Microſcope* examined the bloud of men ſick of Fevers, which hath ſatisfied him over and over of the buſineſs; *for, viewing the blood an hour or two after the opening of veins, I have* (ſaith he) *found it ſo full of Worms, that it made me almoſt aſtoniſhed, and I have ever ſince been convinced, that man, as well living as dead, may abound with innumerable vermicles though undiſcernible by the eye*; ſo that well may we take up the ſaying of *Job, I ſaid to Corruption, Thou art my father, and to the Worm, Thou art my mother, and my ſiſter.* Theſe Things perhaps may ſeem Paradoxes to ſome Phyſicians, but let ſuch know, * that many things lie hid in the nature of things which were unknown to the Antients, and to ſuch alſo as have lived of late years, which the extraordinary Sagacity of the preſent times hath diſcovered by the benefit of the *Microſcope*, and laid before our eyes.

* Pag. 140.

* Pag. 141.

The Reſult of all I have brought here is this: That the Bodies of men are lyable to be wrought on by each other at a diſtance, by the efflux and intervention

of certain Atoms, Corpuſcles, or Particles; and that theſe Particles ſometimes are *Inanimate*, and ſometimes *Animated* into little inviſible Worms (as in the Caſe of Peſtilential Infection;) but howſoever, be they the one or the other, it is certain that they carry along with them a power able to corrupt Bodies which receive them, and turn them into the ſame nature and bad condition with Themſelves. So much therefore to ſhew, that ſuch indiſcernible Vermicles may be generated within us by ſecret corruptive Cauſes coming from without us, becauſe thoſe Corpuſcles carry along with them Ferments, which have a power Alterative lodged in them, able to work upon Bodies of the ſame kind in eſpecial manner, and by Fermentation convert both bloud and humors into their own ill Nature, even as a very little leven leveneth a whole Tub of Meal. But admit this could not be, yet the Caſe concerning our new *Hypotheſis* touching Worms (great or ſmall, viſible or inviſible) to be conſidered in the conſtitution of all or moſt Diſeaſes, becauſe ſomwhat of Putrefaction attends all humane Bodies, is plain enough from Corruptive Cauſes lurking within us.

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But it may be objected, Men in all times have had Putrefaction, and ſo doubtleſs Vermicles latent in them, in Ages paſt as well now, though they had no *Microſcope* to diſcover them, and yet they had not ſuch ſtrange prodigious Diſtempers attending their Diſeaſes as you talk of, by reaſon of ſuch Worms or Vermicles; why then do you inſiſt ſo much upon Worms now, as a main Cauſe of the unuſual Symptoms and Alterations in almoſt all Diſeaſes, more than in former times? I anſwer, 'tis true, ſuch Worms (no doubt) in reſpect of magnitude (or rather littleneſs) have lurked in the parts, bloud, and humors of men in all Ages, becauſe of Putrefaction, and have been Cauſes of ſo much miſchief as the force of their nature could extend to; but conſider, 1. That in old time, even the great Worms were not ſo frequently attendant upon other Diſeaſes, as now we find them; for in reading of *Hippocrates* & *Galen*, and their followers, little is ſaid of Worms in any other Diſeaſe but Fevers; but now adays we find them much more frequently in Fevers, yea and in Diſeaſes of the Lungs, Liver, Splene, Heart, Brain, Reins, Bladder, and in the Colick, and Pains of the ſides, and of the

back, *&c.* which have all vaniſhed upon the avoidance of Worms, effected by mixing Anti-verminous Medicines with other: which being a matter rare to be heard of till this latter Age, is an evidence, that now Bodies of men have uſually more Putrefaction in them, for which many common Cauſes drawn from the latitude of Luxury in latter times, may be aſſigned, but I wave them as needleſs: only let me obſerve here, that in thoſe greater, as well as the leſſer Worms, the Symptoms are more ſtrange and violent than heretofore. I had a gentlewoman not long ſince afflicted with a Pain in the region of the Liver; after other remedies uſed in vain, I gave her a gentle Purgative mixt with ſomewhat againſt Worms: It brought a great one from her, and after once or twice more uſing the ſame remedy, the Pain went away. Another, a gentlewoman of quality, now in *Southwark*, who the laſt year had a great pain in her ſtomack, a Cough, a great Inflation or Tumefaction in the region of the Liver; She ran all the Round of Phyſicians and Remedies, and her Body was waſted to the loweſt ebb of a Conſumptive ſtate; but by Advice of a great Lord,

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who *ſuppoſed* wind to be a Cauſe, She chawed Tobacco, by which means vomiting (a little too violently for ſo weak a Body) She threw up 7. or 8. Worms; whereupon the pain went immediately away, all other terrible Symptoms were at an end, and She ſoon recovered to a perfect ſtate, without any other means. This week, wherein I now write, an Elderly woman, long afflicted with all the imaginable Symptoms which are wont to attend Hypochondriack Melancholy, and which nothing elſe would eaſe, by giving her Pills which are wont to work out Worms, many ſtrange ones came from her, day after day. I could run out at large in Inſtances of this nature; but that were more fit for a particular Treatiſe about it. If the great Worms do miſchief thus, what may we expect from the little ones, that are in the more abſtruſe and ſolid parts, and in the very bloud and humors?

2. Conſider, that as Putrefaction is more frequent, ſo it is more virulent, having in it a greater degree of Venom than in elden time: For, you may remember what is noted before, *That according to the various diſtemper of humors, Putrefaction*

acquires venoms or virulencies of various Natures, and divers powers in working, according to the various manner of combination of Malignant Humors; and ſo if the inviſible Animals or Vermicles thence generated, ariſe now from a combination of humors, of condition more virulent and malignant than was known heretofore, 'tis no wonder, if Diſeaſes be more often cauſed by them, and become more dreadful in their effects and Symptoms. Now, if you enquire, how the humors of men's Bodies, which are the Subject of Putrefaction, come to be more malignant and Poyſonous than formerly, I, to avoid a tedious repetition of things, referr you to the foregoing Chapters of this Diſcourſe, which ſufficiently point out the new Parents of Putrefaction and Malignancy, *viz.* the *Pox* and the *Scurvy*, by which I have manifeſted what a marvelous Change hath been wrought in the whole Frame of the little world of man; ſo that the exotick Ferments being propagated and ſublimated to a great height of venom, in their combination with our Bloud and Humors, the venemous Product of putrefaction thence ariſing muſt needs induce a Malignancie in every malady, and conſequently

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in *Worms*; not only in the viſible ones of all ſorts, but (which is of more ſad and ſerious conſideration) even in thoſe petty Vermicles, which (whether they come into us from abroad, or breed within us) do the moſt frequent and greateſt miſchiefs, becauſe the Parts and Liquors of our Bodies are rarely free from them, yet few or no Phyſicians take notice of them, or have remedies that will reach them; and ſo theſe inviſible Vermin being neglected, as well as the greater, render moſt Caſes incurable, becauſe being of a nature more poyſonous and penetrative than in former Ages, they are now, by an active exerting and diffuſing their virulency within the Body, become more able to Taint it, and more apt than ever to rage, and do prodigious executions.

But becauſe many are ſwayed in their Judgements, more by the concurrence of Teſtimonies, than any other Evidence, give me leave therefore to conclude this Chapter with the opinion of *Langius*, preſent publick Profeſſor in the Univerſity of *Leipſick* (whom I have occaſion to mention once or twice before;) He, in his Preface before *Kircherus* declares himſelf abundantly ſatisfied about theſe things, and

names one Dr. *Hauptman*, another *German* Phyſician, who affirms the ſame in a Book entituled *De vivâ Mortis imagine. I ſhall not* (ſaith he) *inſiſt upon thoſe many moſt faithful Experiments made by* Kircherus, *and others both Phyſicians and Chirurgians, who have abundantly proved with the Microſcope, that upon the opening of Buboes and Tumors, they have been found full of innumerable Vermicles undiſcernible by the eye.* The like may be ſaid of Wounds and Ulcers which ſo frequently puzzle ſuch as endevor the Cure of them. But he goes on, and diſcourſes of that terrible Diſeaſe the *Purples*, which ſo frequently befalls women within the month after child-delivery, for, it having baffled the greateſt Phyſicians and their moſt pretious Cordials, thereupon he and *Hauptman* laid their heads together, and concluded the Principal and Immediate Cauſe of that roughneſs of the Skin in that Diſeaſe, muſt be from ſome extraordinary Putrefaction within; *and ſo examining the matter with the Microſcope, they found thoſe petty Vermicles, ſpred upon the whole Superficies in the rough parts of the Skin; by which means you have here an Infallible experiment, touching the Original of that moſt Malignant*

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diſeaſe the Purples, *which is further confirmed by this, that after the uſing of all the Bezoardicks, Diaphoreticks, and Cordials commonly ſo called, without any ſucceſs, he betook himſelf to the uſe of ſuch remedies as have a power to kill and mortifie the putrid ſeminaries of worms, by mingling them with ſuch other remedies as were proper in the Caſe.*

From hence he bids us, *with the like prudence to collect the cauſes and cures of diſtempers in the Meaſels, Small Pox, and Spotted Fevers,* &c. *and if you follow his example cloſe,* he ſaith, *you will not err from the ſucceſful way of curing: And he knows no reaſon why he ſhould not, in all and ſingular diſeaſes which have any thing in them of a notable putrefaction or Fermentation of vitious humours, reſolutely aſſert, that they ſpring from ſuch a verminous ſeminary of Animals, ſeeing he hath ſeldom failed of a proſperous ſucceſs by ſuch a courſe of Cure: For, as I affirm* (ſaith he) *that Inveterate head-Aches, Pleuriſies, accompanied with intolerable pain, Pains and Gnawings of the Stomack, Torments, Gripes, or Wringings of the Bowels, Epileptick Convulſions, Arthritical Tortures, and other the like diſtempers, do ariſe from* Effluviums *and Exhalations quickned into*

Animals, which, as being exceeding ſlimy, very eaſily adhering to the Nervous and Membranous parts, doe, by twitching and lancing, affect them with very cruel pricking and ſhooting pains perpetually; So alſo by adminiſtring ſuch remedies as are ſpecifically deſtructive to Worms, and which have a ſtrong power to precipitate them, all pains have been removed out of the body. Thus he; and in purſuance of this Doctrine, he promiſeth ere long to publiſh a Treatiſe with the Title of *Pathologia Animata.*

Now leſt any ſhould object it a matter impoſſible, that there ſhould be ſo quick and ready a tranſmiſſion of thoſe little Animals along with the Liquors of the Body from one part to another; let me have leave to add one Teſtimony to illuſtrate this; and it is that of the ingenious Author *de Ratione Motus Muſculorum* lately printed, who, page 9. after he hath ſhewn *that all the Membranes of the body, as well as the Muſcles, are filled with a ſubtile ſpirituous Liquor, which perpetually paſſeth through all their Fibres, and keeps them in a due Tone,* ſaith, *No man can think this too much to be granted, who conſiders thoſe very very little Animals which are furniſhed with all their appertinences, and yet are leſs than the ſmal-*

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leſt of thoſe Fibres. And truly if this be ſo, tis no hard matter to conceive, but they may paſs along through the Fibres, with celerity, as well as the ſaid Liquor. But enough of this for the preſent, ſeeing it may ſerve to give ſome light, how much Diſeaſes are altered from their old ſtate, in reference to *Vermination*; and to ſtir up the wits and ſpirits of ingenious men, to make further inquiry into this, and many other Particulars, touching which we have no relief from the antiquated Doctrines and Medicines of former Phyſicians.

CHAP. VI.

The Inſufficiency and Uſelesneſs of the old way of Phyſick, in reſpect of Method *and* Medicines, *arguing a neceſsity of a new.*

IF my Premiſes be true, certainly the Concluſion will naturally follow: If all manner of Diſeaſes are grown more rebellious, or more mortal than formerly; if they are all altered from their ancient State

State and Condition; if the Causes of this Alteration were never known to the old Founders of Physick, nor taken notice of by any that succeeded them, nor by any in this last Age so fully, as the matter requires; If also through the marvellous alteration by them wrought, there be introduced as it were another Nature both in men and Diseases; then it clearly follows, that the former Rules and Doctrines calculated for Curation from a consideration of other Causes, or from Causes less important, are almost, if not quite out of dores; and that the old Medicines, the invention of which was grounded upon such Doctrinal *Hypotheses* or Suppositions, as in these days of ours are least considerable, must needs be in difficult cases useless, and in most cases insufficient; and that all manner of Encouragement ought to be given to such men as labour to establish new Doctrines, new Methods, and Rules of Curation agreeable to the new frame of humane nature, and to the new *Phænomena* of Diseases; and that my Brethren ought to apply themselves with all industry thereto, and instead of dwelling upon old Notions and Remedies, betake themselves to the Invention of new, more rational, and less loth-

lothſom, and which may more effectually meet with Diſeaſes in their very Root and Original.

This is a hard Chapter to be read by men that have taken up their reſt, would lie a bed, becauſe their names are up, and mean no more to go to School: but let ſuch know tis no ſhame to learn; *Ars longa, vita brevis*; the Age of *Methuſelah* is too ſhort a time to run a round to any purpoſe in the Field of Nature; could I live 1000 years, I might always find work in a Laboratory and a Study, for the advancement of Phyſick both in Theory and Practiſe. The Maxims of our Profeſsion are not like thoſe of the *Spaniſh Monarchy, which*, Monſieur *de Balzac* ſaith, *are eternal*; and he gives this Character of the great Dons of *Spain*, that they and their Kings have them annexed to their Birthrights, being bequeathed to them by their Fathers, and conveyed down to them by Inheritance; and tis ſaid, they are ſo preciſe in the obſervation of thoſe Maxims, that they will hardly recede a moment from them, though it were to ſave the Monarchy. Perhaps there may be ſomewhat of *Hyperbole* in this: but however, it will become Phyſicians not to take up ſo

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pertinacious a ſtately Humor, either when a Life lies at ſtake, or in their ordinary Courſe of practiſe, as to tye themſelves to old Methods and Aphoriſms, remembring what prudent *Celſus* (the great Plagiary of *Hippocrates*) ſaith, *Vix ulla perpetua præcepta Ars Medicinalis recipit, Scarce any of the Precepts of the Art of Phyſick are perpetual*; and truly, by ſtiff adherence to them, many a perſon hath been loſt, but the Thing may be juſtified, becauſe he died by Rule and *Secundùm Artem.*

This is pretty tartly touched by that noble and induſtrious perſon Mr. *Boyle*, in his * *Experimental Philoſophy.* There was a while ſince (ſaith he) a witty Doctor, *who being asked by an Acquaintance of mine of the ſame Profeſsion, why he would not give ſuch a Patient* more generous remedies, *ſeeing he grew ſo much worſe under the uſe of* common languid ones, *to which he had been confined, alleging, that at laſt he muſt needs die with them in his mouth: He briskly anſwered,* Let him die, if he will, ſo he die Secundùm Artem. *I hope there are but few of this man's Temper; but it were to be wiſhed there were fewer men that think that a Phyſician hath done enough, when he hath lear-*

* Part. 2. Eſſay. 5.

learnedly diſcourſed of the Seat and Nature of the Diſeaſe, and methodically employed a company of ſafe, but languid remedies, as unable to cure the Patient, as unlikely to kill him: For, by ſuch an unprofitable way of proceeding, to which ſome lazie, or opiniona-ted Practiſers of Phyſick, have, under pre-tence of its being ſafe, confined themſelves, they have rendered their whole Profeſſion ob-noxious to the Cavils of Empericks. So Monſieur de Bilzac *(in his witty French Diſcourſe of the Court) hath a ſtory of a Phy-ſician of* Milan, *that he knew at* Padua, *who being content with a poſſeſſion of his Science, and (as he termed it)* the Enjoyment of the Truth, *did not only not particularly inquire into the Cure of Diſeaſes, but boaſted that he had killed a man with the faireſt Method in the world.*

It were to be wiſhed they would rightly apprehend the nature of Diſeaſes in this Age, and their Cauſes, before they lay ſo much ſtreſs upon old Methods and Means, and tie up men to their Forms: For (as it is well obſerved by the ſame * learned man of honor) they cannot agree yet about the Nature and Cauſes, and therefore no mar-vel they that would be thought the ex-acteſt Methodiſts, do miſs ſo often of a right

* Ch. 12.

right Method. *Tis not* (ſaith he) *that I am an enemy to Method, or an undervaluer of it, but I fear the generality of Phyſicians have as yet but an imperfect Method, and have, by the narrow Principles they were taught in the Schools, been perſwaded to frame their Method, rather to the barren Notions of the Peripatetick School, than to the full amplitude of Nature. Nor do I find, that Phyſicians have yet done ſo fit a thing, as ſeriouſly (and with ſuch attention as the importance of the thing deſerves) on the one ſide, to enumerate and diſtinguiſh the ſeveral Cauſes, which may any whit probably be aſsigned, how the* Phænomena *of that diſorder'd ſtate of mans Body, which we call a Diſeaſe, or its Symptoms, may be produced; and on the other ſide, by how many, and how differing waies the* Phænomena *may be removed, or the Diſeaſes they belong to may be deſtroyed. And if this were Analytically and carefully done, I little doubt but that men's knowledge of the Nature and Cauſes of Diſeaſes, and the ways of Curing them, would be leſs circumſcribed, and more effectual than it was wont to be. And I am apt to think, that even Methodiſts themſelves would find, that there are divers probable, if not promiſing Methods (proper to divers Caſes) which waies they yet over-*

over-look: And though in a right ſence it be true, that the Phyſician is but Nature's Miniſter, and is to comply with her, who aims alwaies at the beſt; yet if we take them in the Sence wherein thoſe Expreſſions are vulgarly uſed, I may elſwhere acquaint you with my Exceptions at them. In the mean time, I confeſs to you, that I know not whether they have not done harm, and hindred the Advancement of Phyſick, faſcinating the minds of men, and keeping them from thoſe effectual Courſes, whereby they might potently alter the Engine of the Body, and prevent or cure divers ſtubborn Diſeaſes, more happily than the vulgar Methodiſts are wont to do. And indeed, 'tis ſcarce to be expected, that till men have a righter knowledge of the Principles of Natural Philoſophy, without which 'tis hard to arive at a more comprehenſive Theorie of the various poſſible Cauſes of Diſeaſes, and of the Contrivance and Uſes of the Parts of the Bodie, the Method which ſuppoſeth this knowledge, ſhould be other than in many things defective, and in ſome erroneous, as I am apt to think the vulgar Method may be ſhewn to be as to ſome particular Diſeaſes. To be ſhort, how much eſteem ſo ever we have for Method, yet ſince that it ſelf, and the Theories whereon men ground it, are, as to

divers Diſeaſes, ſo hotly diſputed of, even among eminent Phyſicians, that in many Caſes a man may diſcern more probability in the ſucceſs of the remedy, than of the truth of the received Notion of the Diſeaſe. In ſuch abſtruſe Caſes, methinks it were not amiſs to reflect upon that reaſoning of the antient Empericks (though upon a ſomewhat differing occaſion) which is thus ſomewhere expreſſed by Celſus,

* *I have read it in the Preface of Celſus.*

* Neque ſe dicere conſilio medicum non egere, & irrationabile Animal hanc Artem poſſe præſtare, ſed has latentium rerum Conjecturas ad rem non pertinere; quia non interſit quid Morbum faciat, ſed quid tollat. *And as the controverted Method in the above-mentioned Diſeaſes, is not yet eſtabliſh'd or agreed on in the Schools themſelves, ſo divers perſons that are wholy ſtrangers to the Schools, do yet by the help of Experience and good Specificks, and the Method which their Mother-wit, according to Emergencies, doth prompt them to take, perform conſiderable Cures.*

This Teſtimonie of ſo worthy a perſon I have ſet down at large, that I might deliver my own Sence, in the language of one well-known to the world for Sufficiencie, by reaſon of the great expence of time that he hath made in Medicinal Inquiries, continual Converſe with Phyſicians of

of all ſorts, and obſervations of Practiſe both *Rational* and *Emperical*. But leſt you ſhould think, that I like this Diſtinction in the common uſe of it, let me tell you, that I, who for many years have converſed with ſuch Profeſſors of Phyſick, as ſome in ſcorn term *Empericks*, and obſerved their various waies, and thought it no ſhame to make Collections from them, and from all the Old women I could meet with, which pretended to any thing of Phyſick, could ſeldom find any of them ſo irrational, as not to give ſome tolerable reaſon, and ſo much as ſatisfied me, that for the moſt part they had reaſon for what they did; and though perhaps their Diſcourſe came not from them, cloathed with ſuch delicate Terms of Art, as paſs current among the Schools, yet giving them ſome grains of Allowance, I concluded they ſpake reaſon, and that their Method was right, becauſe it was fitted to the Medicins they uſed, and both Method and Medicins ſo well agreed as to make Cures in many deſperate Caſes, left as incurable by others: And I muſt profeſs, that by obſerving the Practiſes of theſe, I have had opportunities to ſee more of Nature in her naked appearances and operations (as to

the condition wherein ſhe now ſtands in this preſent Age) than ever I could diſcover in all the Volumes that I have read. Therefore call men *Empericks*, or what you will, becauſe they are neither graduated nor incorporated, I ſhall ever eſteem ſuch to be moſt *Rational*, as make Art to follow Nature, rather then ſtrain Nature and her Anomalies to general Rules of Art, and who ſeeing Nature degenerated into Extravagancies never known heretofore, do endevor to find out new waies and Remedies to deal with her: which he that adheres to that old Philoſophy, which is uſually made the entrance into Phyſick, will never be able to do; *for* (as it is well noted by the ſame Gentleman*) *indeed the Phyſiology wherewith Phyſicians, as well as others, are wont to be imbued in the Schools, hath done them no ſmall diſſervice, by accuſtoming them to groſs apprehenſions of Natures wates of working.* And I find, that thoſe Apprehenſions commonly ariſe from Preconceptions grounded upon ſome general Aphoriſms and Concluſions delivered by Authors, who (as my Lord *Bacon* notes) never took the right way towards an attainment of Science in things Natural, which ought not to be founded upon what we

* *Part.* 2. *Pag.* 237.

we conceive in our Brains, but rather upon ſenſible Objects and Experiments, and ſo, through an enumeration of particular Experiments, we may by way of *Induction* riſe up to a power of eſtabliſhing general Concluſions; but for want of this, men have made too much haſte in ſetting down Principles of Sciences. * *For, they uſe commonly to take a Proſpect of Nature, as from ſome high Turret, and to view her afarr off; and are too much taken up with Generalities, whereas if they would vouchſafe to deſcend, and approach nearer to Particulars, and more exactly and conſiderately look into things Themſelves, there might be made a more true and profitable diſcovery and comprehenſion. Now the remedy of this Error, is not alone this, to quicken or ſtrengthen the Organ, but withall to go nearer to the Object: And therefore there is no doubt but if Phyſicians, letting Generalities go for a while, and ſuſpending their Aſſent thereto, would make their approaches to Nature, they might become Maſters of that Art, whereof the Poet ſpeaks,*

* Bacon, Advance of Learn. l. 4. p. 189, 190.

Et quoniam variant Morbi, variabimus Artes;
Mille Mali Species, mille Salutis erunt.

Ovid. Remed Am. l. 2.

Becauſe Diſeaſes vary, therefore we
Will varie Arts of Cure; and though there be
A Thouſand ſorts of ſtrange Diſtempers ſteal
On us, wee'll have a Thouſand waies to heal.

Which (as the ſame noble Philoſopher and Lord tells us) *they ought the rather to endevour, becauſe the Philoſophies themſelves, upon which Phyſicians, whether they be Methodiſts or Chymiſts, do rely, are indeed very ſlight and ſuperficial. Wherefore, if too wide Generalities, though true, have this defect, that they do not well bring men home to Action, certainly there is greater danger in thoſe Generals which are in themſelves falſe, and inſtead of directing to Truth, miſtead the mind into the By-paths of Error.* Medicine therefore (*as we have ſeen*) *hath been ſuch hitherto, as hath been more profeſſed than labored, and yet more labored than advanced, ſeeing the pains beſtowed thereon hath been, rather in Circle than in Progreſſion: For, I find much Iteration, but ſmall Addition in Writers of that Faculty.* Thus He. And the Truth is, he might well ſay there

there had been but little Advancement made in the Profeſſion of Phyſick, for, I may ſafely ſay, that there hath been more of importance done to that End, ſince the time of his writing that Book, than ever was done in the world before; for, in former time, men contented themſelves with the little Science that was left them by others, and made no Progreſs, but ran the Round of Comments upon the *Greeks* and *Arabians*, as the Oracles of Phyſick; and uſually one Commentator ſteals out of another's ſo that you have but the ſame Diſh of *Crambe* new cook't; and if you have one of the moſt voluminous, you have in a manner All: look but fifty or ſixty years back, and ſee what a poor Caſe Phyſick was in to what it is now; nay, look but twenty years back, and you will ſay, never had any other Science or Art in the world ſuch an Advance and Alteration in ſo ſhort a time; inſomuch that our Dogmatical Methodiſts can now vouchſafe to uſe commonly ſuch Medicaments, as were ſtartled at before, and with ſome patience hear of ſuch Doctrins, Methods, and other things, as they were wont, at the very firſt mention, to rant againſt heretofore. To ſpeak truth, we

are all of us too apt to prize what we have in poſſeſſion, and to believe it ſo perfect, that nothing can be added to it; or elſe we would have others believe ſo, and when we grow lazie and ſtately, it is our Intereſt to have it ſo, and to perſwade all men of any Intereſt that it ſhould be ſo.

But truly, tis much more honourable to acknowledge, that *the greateſt part of what we do know, is the leaſt part of what we doe not know*, and thereupon to give all manner of encouragement to ſearching heads to make further inquiry, and not ſtraiten the hands of any whoſe induſtry and experiments may contribute toward the compleating of our Art; the Harveſt is great, and the Labourers but few; what vaſt crops are appearing in the ſpatious Field of Nature, to find work for Ages to fetch them forth! therefore it were well, if all men were invited to the Profeſſion and Practiſe of Phyſick and Medicinal Reſearches, in all Countreys of the world; eſpecially the Nobility and Gentry, who by reaſon of their Eſtates and Intereſts, would be more able, and attain greater opportunities than other men, to enquire, and invent, and ſpend their time in Practiſe, eſpecially among the Poor: which

which in former time (as we read) hath been the imployment of the greateſt Princes. I (for my part) cannot but think highly of ſo brave a Latitude, and ſo meanly of my ſelf, as to ſet my ſelf to learn of the meaneſt perſons (though my education hath not been inferiour to others) rather than ſcorn or oppreſs them; but if I would trample on any, it ſhould be upon the ſelf-conceited, and the proud, and that I would do to purpoſe, *calcare ſuperbiam majore cum ſuperbiâ*, and afterwards deſcend to confer with the loweſt of this profeſsion, to gain an underſtanding of his Notions about Nature, his way of practiſe, and the Reaſons of it, and his Obſervations; and what I have already gained by collections thus made, perhaps you may have an account of in publick hereafter.

In the mean time know, *Hippocrates* himſelf gives it in command in his Book entituled *Præceptiones*, that you count it no diſparagement to learn of the moſt Contemptible perſons, *Ne cunctèris, etiam ab Idiotis inquirere & diſcere, ſi quid ad medendi occaſionem facere videatur*; *Be not ſlack* (ſaith he) *to inquire and learn even from Idiots, if they have any thing that ſeems to promote a Cure upon occaſion.* Of this generous

nerous teachable temper Mr. *Boyl* himſelf is a noble example, who (I hear) diſdains not to learn and collect from any perſon: And in one place * he noteth it was the cuſtom alſo of *Henricus ab Heer* a great obſervator at the *Spaw*, who in his Book entituled *Obſervationes oppidò raræ*, ſhews that he thought it not beneath his dignity to record divers receipts that he had from *Mountebanks*, yea, and from *Gypſies*. I remember alſo, that the late great Collector *Riverius* tells, in his Book of Obſervations, of his learning of a Beggar-woman to cure the *Hæmorrhoids* with *Millefoil* infuſed in fair water, and drunk for a moneth together, which uſually took effect with all that uſed it; and a Chirurgians wife and another woman are named, that were ſo cured. And the learned Gentleman above named thinks it no ſhame, to learn from the experiments and practiſe of * *Farriers*, *Graſiers*, and *Shepherds*, who deal with Brutes, how to make Additions to the Art of curing the Diſeaſes of men; *many ſuch things* (ſaith he) *may ſerve, either to enrich or illuſtrate the way of curing humane Bodies: Their ignorance, and their Credulouſneſs, together with the liberty and meanneſs of thoſe Creatures which they Phyſick, gives*

* Part. 2. p. 301.

* p. 234, 235.

gives them leave to venture on any thing, it having made them try upon Horſes and Cattel, many ſuch things as Phyſicians dare not try upon Men and Women. And among thoſe many extraordinary things, ſome, as it often happens, have ſucceeded ſo proſperouſly, as to deſerve to be conſidered by the skilfulleſt Phyſicians, ſome of whom might, without diſparagement to their Profeſſion, doe an uſeful Piece of ſervice, if they would be pleaſed to collect and digeſt all the approved experiments ond Practiſes of the Farriers, Graſiers, Butchers, and the like; which the Antients did not deſpiſe, but honoured with the Titles of Hippiatrica *and* Veterinaria; *and among which, if I had leiſure, I might take notice of divers things, that may ſerve to illuſtrate the Method of Curing.*

* Dr. *Primroſe* alſo, in that very ingenious piece of his, Entituled *of Vulgar Errours*, maintaining that our faculty of Phyſick being an *Art Mechanical, and that it is ill done to ſeparate the Phyſick of Men from the Phyſick of Brutes*, ſaith, *The wound of a Horſe differs not* in ſpecie *from the wound of a Man; they have the ſame Cauſes, the ſame Indications of Cure; the Phyſician is the Miniſter, be it of a Horſe, an Ox, or a Man. A Fever Continual, and Intermittent, is a diſeaſe*

* Lib. 1. chap. 18.

diſeaſe common to Horſes, Dogs, Kine, and Men; the Remedies alſo are common, as Bleeding, Clyſters, Purgations, made of Medicaments Simple or Compound. The Phyſick of men hath nothing proper to it, which the Phyſick of Brutes may not chalenge to it ſelf; that they who have written of the Phyſick of Brutes, among the Engliſh (for whoſe ſakes this Book is written) of which Markham *is one, and another an* Italian *(whoſe name I have forgotten) as alſo thoſe Antients who have written of that ſort of Phyſick, doe uſe the ſame Remedies, and that with very great reaſon; for, Medicaments doe not work upon man as he is a Rational Creature or a Man, but as he is a mixt Body.* This is not only his Opinion, but Ariſtotle's alſo, in his *Metaphyſicks*; and in his ſecond Chapter of Rhetorick to his Scholar *Alexander*: yea *Zabarel*, and *Piccolomini*, reprove ſuch Phyſicians as make mans Body alone to be the Subject of Medicine; ſeeing this Art extends it ſelf further. Nor was it in ancient time thought any diſcredit for Phyſicians to obſerve the ways of curing Brutes, which have been taken notice of, and recorded by *Columella*, *Cato*, *Varro*, *Pellagonius* and *Vegetius*, all of them moſt noble Authors. Yea, *Alphonſus* King of *Arragon* retained in Penſion two Doctors

* Lib. 4. chap. 2.

of

of Phyſick, with a large Fee of Allowance to cure his Horſes and Dogs; and enjoyned them to inquire and try, what Remedies, and what manner of Cure did beſt agree with every Diſeaſe of Beaſts; which having done, they ſet forth a very profitable Book about theſe things. The ſame * *Cornelius Agricola* tells us, was done, in his time by *Joannes Ruellius* at *Paris*, a man of great learning, and a principal Phyſician, who wrote a Book to the ſame purpoſe, with Collections concerning Diſeaſes and Remedies of Brutes, out of *Apſirthus*, *Hierocles*, *Theomneſtus*, *Pellagonius*, *Anatolius*, *Tiberius*, *Eumelus*, *Archidamus*, *Hippocrates*, *Hemerius*, *Africanus*, and out of *Aemilius Hiſpanus*, and *Litorius* of *Benevento*; which turned to the great Advantage of the Publick, and the Advancement of the Commonwealth of Phyſick; in the compiling of which Books, theſe noble Authors thought it no matter of ſcorn, to conſult all manner of Grooms, Herds-men, and other keepers of Cattel, and Farriers; from whoſe ruder Speculations and Practiſe, I my ſelf many times have had occaſion to excogitate ways and Remedies for cure of Men, with notable ſucceſs in the application;

* Cap. 87.

cation; and would men lay aſide the ſtately humor, and inquire among all ſorts of Practiſers, both upon Man and Beaſt, and improve inquiries of this nature, a far greater Amplitude would thereby accrue to the Body of Phyſick, than ever can be expected from the moſt diligent Readers, or the moſt lofty Speculators; all that hath been done in Phyſick hitherto, being of but little value to what may be.

Enter into ſuch an humble courſe of Inquiry and Obſervation, and the more knowing you become, the more you will know, that there is abundant cauſe we ſhould deſpiſe no body. As Mr. *Boyle* ſaith of ſuch as cure Beaſts, much may be learnt among them, becauſe they venture with any thing upon thoſe creatures; ſo I find much may be learnt among ſuch as ſome are pleaſed to call *Mountebanks*, *Quacks*, and *Empericks*, eſpecially in Chronick difficult Caſes; for, uſually they are the poorer ſort of people that have recourſe to them, upon whom having moſt liberty to try notable Medicines, and having often tried them with ſucceſs, they goe on, and are not (I perceive) ſo void of reaſon, but they know how

to

to improve them in their practiſe, and can from a Parity of Reaſon (which the Schools call *Analogiſmus*) invent new ones of the like powerful Nature, and which may give you, or me, or any other Phyſician, (by converſe with them) occaſion to endeavour to invent ſuch, or better: now, the like opportunities are not to be had among Phyſicians of higher port, who attending the better ſort of Patients, content themſelves for the moſt part with the uſe of ſuch Remedies, as their Bills upon the File, and the Apothecary will witneſs to be Authoriſed Medicins, and Safe; though I muſt tell them, other Medicins are now by time and experience ſeen to be every jot as Safe, but much more Effectual, which were damned by Bookmen when they were firſt invented, and do now paſs with as much credit and Authority, as if they had never been cried down or contradicted; and doubtleſs, he is a very Wicked Practiſer that will adminiſter any Medicin, which he knows not whether it be ſafe or no; and a very Ignorant one, that is not able to judge certainly, if he doe invent a new Medicin, whether it be fit or no, or who dares not venture it firſt upon his own Body, yet ſhall preſume to

give

give it to another: He that can analyſe natural Bodies, and reſolve them into their Principles, is Scholar enough to underſtand a Medicin. This is not ſpoken therefore to countenance any perſon ſo audaciouſly Emperical, as will at adventure be *trying of Practiſes*, though they have neither Reaſon nor Experience to guide them; but rather to encourage good wits (both great and ſmall) ſeeing Diſeaſes are altered, and doe ſtill alter, and many of them prove incurable by old methods and means, that they will not be ſo preciſe as to judge of mens inſufficiency in curing, by their skill in old learning, but rather by their knowledge of the Principles or parts of mixt Bodies, and the ordering of them for Medicin, their acquaintance with the preſent *Phænomena* of mans nature and of Diſeaſes, and by their Induſtry in making Experiments and Remedies proportionate thereunto. How many in this great City have I ſeen excellent at this, who never ſaw an Univerſity! Therefore hear again what Mr. *Boyl* ſaith, * and very excellently to the purpoſe, *that as Phyſick hath owed its beginning to Experiment, ſo thoſe that practiſe it muſt inlarge and rectifie their Principles, according*

Pag. 286, 287.

to

to the new Diſcoveries which are made from time to time, of the Operations and power of the Productions, whether of Nature or Art. Celſus *in his excellent Preface, ſpeaking in the ſence of the old Empericks, of the original of Phyſick,* ſaith, that Remedies being firſt found out, Men began to diſcourſe of the Reaſons of them; and that Medicin was not invented after Reaſon, but Reaſon was inquired into after the Invention of Medicin. *And leſt the miſtaken name of* Emperick *ſhould make you undervalue ſo uſeful a conſideration, which not the nature of their Sect, but that of the thing, ſuggeſted to them, I ſhall add in favor of experienced, though otherwiſe unlikely Remedies, that tis a Senteuce aſcribed to* Ariſtotle *(and in my opinion one of the beſt that is aſcribed to him)* Ubi res conſtat, ſi opinio adverſetur rei, quærendam rationem, non rem ignorandam; Where a thing is manifeſt, if Opinion be againſt the thing, then the reaſon of it is to be inquired after, but the Thing it ſelf ought not to be diſowned. *And certainly, though there be ſcarce any ſort of men, whoſe credulity may do the world more miſchief than that of Phyſicians; yet perhaps neither Nature nor mankind is much beholden to thoſe, that too rigidly or*

narrowly circumscribe, or confine the operations of Nature, and will not so much as allow themselves, or others, to try whether it be possible for Nature, excited and menaged by Art, to perform divers things which they never yet saw done, by divers waies, differing from any, which by the common Principles that are yet taught in the Schools, they are able to give a satisfactory Account of. Thus he.

And truly, the reason why I drive this Nail so home, is not, that I think that noble person a Friend to unlearned Empericks; nor that he, who hath so great a portion of Learning, would be reckoned an enemy to Learning and Learned men; only, I perceive he is of my mind in another part of his Book, where he implieth, there is no such need of Learning (commonly so reputed) to make a good Physician; for, *he *Pag. 395. *by conversation with eminent Physicians having found, that the learnedst of them disagree so much about the Nature and Causes of Diseases*, admits, *that a man may prosperously practise Physick, that is either ignorant of, or dissents from the received Doctrines of the Schools concerning the Causes of Diseases, and some other Pathological Particulars, provided he hath a Mediocrity or competent measure of knowledge in Anatomie, and the Nature of Dis-*

Diſeaſes and their Symptoms, &c. Nor do I cite this, as if I my ſelf were of the Spirit of *Hercules Bovio*, (the noted *Italian* Emperick, contemporary with *Fracaſtorius* and *Fumanellus*) who wrote a Book Entituled *Il Flagello di Medici Rationali, the Scourge of Rational Phyſicians* (which I have read tranſlated, though not printed in Engliſh;) but I believe an old way of Profeſſion of any Art to be very irrational, when the Subject matter of it is alter'd and become new (as I ſuppoſe I have proved that of Phyſick to be,) and I am * of *Crato's* mind, who allows a man that hath expert Medicins, to practice them, if he be ſo rational as with reaſon to adminiſter them, *For* (ſaith he) *though a Phyſician ſhould conſider the Cauſe, and the Part affected, and think that ought more to be inſiſted on than extraordinary Receipts of Medicins, yet I queſtion not but an expert Medicin adminiſtred with reaſon, may avail more than that which is ſometimes ſuddenly deviſed with great reaſon by a moſt learned Phyſician: And upon this account* (ſaith he) *I agree with* Hippocrates, *that even the Rational Phyſicians ought to give place to the Empericks.* 'Tis not vaſt reading and learning of other men's ſpeculations that makes a Phyſician, but a

* *He was Phyſician to three Emperors.* Conſil. 322.

near Approach unto Nature (as my Lord *Bacon* calls it;) a ſtrict and conſtant obſerving of her Motions and manner of Operations, is that which gives a man light how to trace her in the darkneſs of obſcure Cauſes, when ſhe is out of order, and to reduce her into order; and an obſerving of the various effects, or non-effects, and operations of all ſorts of Medicaments, both old and new, together with a man's own manual operation in making them, will inlighten him and conduct him ſo far, as to perceive Cauſes more evidently, and take off a great part of that Scandal hitherto imputed unto our Profeſſion, that it is but *Ars Conjecturalis*, a meer Conjectural Art, and the beſt part of the Profeſſors but *good gheſſers*, and of little uſe, ſeeing that men have been too apt to argue like the Empericks in *Celſus*; that *as long as the Cauſes of Diſeaſes and of Natural Actions, were obſcure, it was to no purpoſe to inquire into them, becauſe their Nature was incomprehenſible*, and thereupon they have been as apt alſo to conclude, *Ergo* No need of a Phyſician. *Neque enim credunt poſſe eum ſcire, quomodo morbos curare conveniat, qui unde hi ſint, ignoret*; *They will not believe he can know how to cure Diſeaſes, who knows not from*

from whence they proceed. And (ſaith the ſame Author) *oftentimes new kinds of Diſeaſes fall out in which Experience never yet gave any light: It is neceſſary therefore to conſider how they began, without which no mortal man can underſtand, why he ſhould uſe one thing more than another*: And therefore the Empericks had reaſon to plead, that they ought to have as much liberty to practiſe, as others, while Cauſes remain'd obſcure, becauſe all Parties were in the dark alike in reſpect of Cauſes: And if I by this preſent Treatiſe have (as I believe I have) diſcover'd more plainly the moſt important Cauſes, latent in moſt Diſeaſes of this latter Age, than hath been done by any one man before me, and made the matter eaſie to be underſtood by the meaneſt Capacity, certainly all being alike inſtructed, other men as well as Scholars, little reaſon is to be given why all Profeſſors ſhould not have liberty alike to practiſe, as well thoſe they term Empericks as others, ſo rational and new a Foundation being here laid to deal with our Diſeaſes, which are proved to be in a manner wholy new; and truly there is great reaſon theſe they call Empericks ſhould be pleaded for, becauſe by prying into their Experiments and Practiſes, I

was confirmed in my Apprehenſions about this matter when I firſt entertained them in my mind, and have ſince been quickened by continual obſervation, to adventure upon this Undertaking, for the publick Good of Phyſicians and their Patients.

Wherefore from this plain Diſcourſe of mine, it being certain, that Diſeaſes are become new, and it being evident withall, what the Cauſes are, why their preſent ſtate and qualification is (for the moſt part) different from the old; and ſeeing a more certain way of Practiſe doth thence now ariſe, if Remedies be found out to oppoſe and conquer them in their new Qualifications; What remains then, but that all Profeſſors do ſet their Wits on Work about the inventing of proper Remedies? in the mean while, till that be done, it is of publick concern that they be encouraged, and perſwaded ſo to order ſome of the Medicaments which are already in uſe, that they may be fitted for the purpoſe. 'Tis incredible how much a good wit may do this way, by fitting ſome ordinary Medicins to ſtrike at thoſe Cauſes, which I have labored to explain in the foregoing Chapters. What then might be done by more

more generous remedies? Therefore I hope men will be excited to ſet themſelves on work, and in working proceed upon the Principles here mentioned, toward the inventing of higher and more noble Medicins, which may be of ſo large an extent and reach, as to purſue and overtake thoſe cauſes whereſoever they be, and of ſo comprehenſive a nature as to cope and conteſt with them, be they either complicated (as for the moſt part they are) or ſingle; for, theſe being now known to be the main Conſtituents in moſt diſeaſes (eſpecially ſuch as formerly ſeem'd to be moſt occult and difficult) then, if it be true, that when the cauſes are known, Cures are half done, I ſuppoſe every Practiſers Mother-wit may inſtruct him, being a man of good parts, how to form up a Method for his own uſe, by fitting it not only to the Nature and complication of thoſe general cauſes, which are (more or leſs) concerned and prevalent in the ſtrange and ſtubborn maladies of this Age, but alſo to the nature of ſuch Medicaments as he is maſter of: For, a particular Method may be uſeful and effectual, being joyned with the uſe of ſome Medicins, which will do little or no good

in the uſe of other Medicins; as I have frequently ſeen.

Vain therefore is that Learning which ties men up to a general ſet Method in curing, and inables them to excuſe themſelves for any thing they do, if they can but produce an od Aphoriſm, or Text of *Hippocrates* or *Galen*, for a juſtification, and thereby prove (as *Balzac*'s Italian Doctor did at *Padua*) that the *Patient died with the faireſt Method in the world*; whereas that ancient Prince of the Faculty, and *Galen* the Uſurper, being no Prophets, and little able to divine what Alterations of things would fall out in our days, could never foreſee how to frame Precepts and Rules to guide Us in our Concernments. There are many things admitted and enjoyned by them in the *Methodus Medendi*, which may by no means be allowed in ours, as the Caſe now ſtands: It will not be amiſs therefore if I give you here an *Eſſay* (as brief as I can) in making inquiry what things for the future ought to be excluded out of the Profeſſion of Phyſick as unneceſſary or falſe, and what to be admitted; what old Foundations and Buildings are to be demoliſhed, and what new ones eſtabliſhed.

To

To doe this fully, by excurring into all Particulars, would require the compiling of a vaſt volume; but I ſhall content my ſelf with ſome of the moſt conſiderable.

CHAP. VII.

A particular inquiry into the main Philoſophical Principles of the Profeſſion of Phyſick.

Sylvius de le Boe, preſent Profeſſor of Phyſick in the Univerſity of *Leyden*, begins one of his diſputations thus: * *I cannot but wonder* (ſaith he) *that ſome Phyſicians, who are eminent for learning, ſhould be ſo abſurd, as not to be aſhamed even now openly to profeſs, that all things which may make for the perfection of Phyſick, were known to any one or more of the Antients, although they are diſcovered to be falſe by every days experience.* Yea, ſome are ſo fond as to urge, that in the inſtitutions of Phyſick, we ought ſtill to tread cloſe in the ſteps of the Antients, in the training of Students to the Profeſſion. But tis too late now to inſiſt upon blind obedience about

* *Diſput. Med. Theſ.* 1.

about things Natural: especially seeing many of the *Galenists* have been so ingenious, as to declare their Judgement, that many things received as previous to Physick are unnecessary. My Lord *Bacon* in the 31. *Aphorism* of his *Novum Organon*, saith, tis in vain to expect any Advancement in Science, *by super-inducing or grafting new things upon old; but an Instauration is to be made from the very lowest Foundations.* Give me leave therefore to strike at the very Foundation of our faculty: and here I have one leading me the way, who (I suppose) of a pure Galenist, is the quaintest person that hath written, next after the most delicate *Fernelius*; I mean *Heurnius* the Hollander, who was Physician to old *William* Prince *of Orange*. In his Comment upon the Book of *Hippocrates de Natura hominis*; he in order to the study of Physick, cashiers the common Doctrine of the four *Elements*, and saith, *To what purpose is it, in order to Physick, to search into the Nature of Elements? truly it is sufficient if we inquire into the powers and operations of Nature, so far as she hath an influence in the mutation of Bodies.* In another place he saith, we ought to trust our sences rather than the opinions of

of Philoſophers; for, it was one good ſaying of *Ariſtotle*, *Nihil eſt in Intellectu quod non prius fuit in ſenſu*; and my Lord *Bacon*,* makes Sence the ſureſt guide for our Underſtanding in diſcovering the ſecrets of Nature, and proves at large, that if we will have any ſound knowledge of Nature, there is a neceſſity of deriving Philoſophy from *Senſible Experiments*; we muſt uſe our own Induſtry, and truſt our own eyes, and obſervations, becauſe theſe produce to us ſomewhat that is certain; whereas a Philoſophy and Phyſick formed up of Intellectual Conceptions, digeſted into *Concluſions* and *Aphoriſms*, (ſince the Intellect of man is naturally full of Idols and Phantaſies, and various in every man) muſt needs be but the evaporation of Phantſie; and it tends to the introducing of Opinions without end, inſtead of eſtabliſhing Truth, which always is but One and the Same. Therefore the noble *des Cartes* took a more commendable courſe; for, as *Borel* tells us in his Life, percieving that a knowledge of the Truth was not to be found among men, or Books, he laid them all aſide, and betook himſelf wholly to a contemplation of the Book of the world; and that he might

* *Preface to the advancement of Learning.*

might be at liberty to ſound the depths of Nature, he quitted the Converſation of men, and retired to a little Village near *Egmont* in *Holland*, where leading a ſolitary life for 25. years together, without a Library, he ſpent his time wholly in Experiments, whereby he diſcovered many things worthy admiration, for the benefit of mankind, and formed unto himſelf a new Philoſophy to lead men to Phyſick; ſuch a one as hath drawn many perſons of high parts to follow him, and lay new foundations of Medicin, more conſentaneous to the operations of Nature, than the Book-learning that was in faſhion before it. But none hath made a buſineſs of it ſo exactly as *Regius* the Profeſſor of *Utrecht*, who (as I told you in the *firſt Chapter*) hath turned off all the Doctrine of the *Elements*, *Humors*, *Temperaments*, &c. and ſuch other old Notions, as he reckons to be but mere *Chimeraes*; and I think tis no ſhame to follow ſo worthy a Leader.

But as it hath been my deſign, all along this Treatiſe, to ſay little but what is in the language of the beſt Writers of this latter Age, or agreeable to their Sence; give me leave now to make uſe of one who

who is (I may well ſay) the Ornament of our Nation next to immortal *Harvey*, by name Dr. *Willis*, Profeſſor of Natural Philoſophy in the Univerſity of *Oxon*; one that hath made himſelf a Phyſician indeed and Philoſopher by Fire, and given a good account why he departs from the Doctrine of the Antients touching *Fevers* as well as other things. In the *Preface* he ſaith, *That if he do recede from the common Judgement, he is not the firſt that hath ſwimm'd againſt the ſtream of a received Opinion: That in matters belonging to Phyſick, thoſe things that pleaſed men formerly, will not paſs now, becauſe the Antients, reſting upon a falſe Suppoſition about the Motion of the Bloud, did very foully and dangerouſly err. That the Art of Phyſick ought to be wholly renewed, and the old Props failing, Poſterity is concerned to take care that the Fabrick be re-built from the very ground. That ſeeing we have now gotten new lights, and a knowledge of the Cauſes of things formerly unknown, it becomes not prudent men, and ſuch as profeſs Philoſophy, to hold their eyes ſhut ſtill. That though the Doctrines of the Antients be yet openly maintained in Univerſities, yet he cannot believe, but that moſt Phyſicians of a deeper In-ſight, doe from their*

their own Reasonings form unto themselves new Hypotheses *to proceed by. That Physick was at first Emperical, and Remedies were invented by frequent trial of particulars, and not by general Precepts or Analogy; and if, after the example of* Hippocrates, *his Successors had betaken themselves to Observations only, and Experiments, without doubt the Art of Physick had been advanced to a greater perfection and fineness, and with much more advantage to the sick. But that which presently shut out the light which had been at first set up, and dimmed the eyes of posterity, was the preposterous endeavour of those men, who hastily, and in a manner after their own Phantasie, framed the Art of Physick into a general Method, after the fashion of some Speculative Science; and so by this means, a copious form of Doctrin, specious enough, but fallacious and instable, was built, before firm foundations were laid.* Thus much you have from one of our University-Professors; and it were well if the Universities would wholly follow his example, and cleanse the Schools throughly from the Cobwebs of old Heathenish Philosophy and Physick.

Much pains hath been already taken by

by the moſt acute and profound *Helmont*, the reading of whom I can never ſufficiently *commend to our Countrymen, now that he is printed* in Engliſh; but know, 'tis not a flight reading will ſerve the turn: Ten times over is too little, though a man ſhould have the help of a Tutor to direct him. Were I worthy to undertake ſuch a work, I could never do the world the like ſervice any other way, as I might in this, by Methodizing the ſeveral pieces of him into ſome better order, rendring his moſt ſubtile Conceptions more familiar and eaſie. And truly, the more regard is to be had to what he writes, becauſe, as he was a noble Philoſopher by Fire, ſo before he betook himſelf wholly to this new courſe of Study, he had been an indefatigable Student in the old; having read over the tedious Works of *Galen* twice, *Hippocrates* once, (getting his *Aphoriſms* without-book) and all *Avicen* he read, and all the *Greeks* as well as *Arabians*, with many modern Authors, no leſs than ſix hundred, and collected Notes out of them all; but after all (he ſaith) counting what coſt he had been at, he found he had gained Nothing, but repented of his Pains, and the

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ſpending of ſo many years to little purpoſe. * The blame of all he lays upon *Galen*, the great Corrupter of ſo much as was tolerable in *Hippocrates*, and of the Schools, with Phantſies: This *Galen* arrogating to himſelf the glory of ſuch as went before him, inlarged the Art of Phyſick, which before was contained in a few Rules, unto vaſt Volumes. He was pleaſed forſooth to determine, according to *Hippocrates*, that all Bodies were made up of *four Elements*; and parallel to theſe he eſtabliſhed *four Qualities*, and ſo many *ſimple Complexions*, and then *as many Couples of complex Qualities*, and thence he confirmed alſo *four Humors* to make up our *Conſtitutions*; which were devices *that others had dreamt of before him*: And then, out of the ſtriſe and diſagreement of theſe, as well ſimple, as complicate with fictitious humors, he would needs derive almoſt all Diſeaſes, with the Scopes and Indications of Cure; as on the other ſide he concluded Health to ariſe from their Agreement and Proportion with each other. Moreover, every Diſeaſe he declared to be but a mere Diſpoſition in quality; and that *Contraries were to be cured by Contraries*. His knowledge in Herbs was

* *Vide Promiſſa Helmontii, Pag* 8.

was so little, that the vertues of Simples he transcribed out of *Dioscorides*, with the Elementary degrees of them as to Heat, Cold, *&c.* altogether neglecting the Seminal and Specifick powers of them, because he was ignorant of them. By which easie road of Art propounded to the world, he procured to himself the Soveraignty of Physick, and Posterity being drawn in by so compendious a Course, a deep Lethargy crept in upon the Schools, through the Dores of Sloth and Idleness; and so it hath continued till this last Age of Industry and Inquiry. This Prince of the faculty (as some would make him) made it his business to rail at others that were before him, as *Herostratus*, *Asclepiades*, *Protagoras*, *Erasistratus*, *Herophilus*, and many more; yea, he spared not his own Master *Quintius*, who was of the Sect Emperical. *Lacuna* an Italian, who hath taken pains to Epitomise him, intimates, that his scolding humor came to him by kind, his Mother having been such another perpetual Clack to his Father, as *Xantippe* was to *Socrates*; nor did he himself * spare his own Mother, but gives the like Account of her in one of his Books: No wonder then, that he swells

* *De cura nosceadis curandisq. Animi affectibus.*

up his volumes with ſo many impertinent digreſſions to abuſe others, which being taken away by his *Epitomizer*, all his Doctrin is reduced but to one volume, not very big, though tis ſaid the number of what he wrote was 400. volumes; and the ſame perſon ſaith, he collected out of them whatever he found of Subſtance. He was ſo quarrelſom at *Rome* at his firſt coming, that the City was too little to hold him and the other Phyſicians; which made him retire out of it for a ſeaſon; but having gained the opinion of the Emperor *Antoninus*, and cured his two Sons *Commodus* and *Sextus*, of ſl hgt Fevers, the Empreſs *Fauſtina* cried him up to the sky, being taken with the ſucceſs; thereupon he began to grow inſolent, and made a ſhift to inſinuate ſo at Court, as to eſtabliſh himſelf a Faction, which enabled him to triumph over all other Phyſicians, and by the countenance of Imperial Majeſty give Laws to all the world in Point of Phyſick; wherein the Students of this faculty have moſt ſupinely acquieſced till this latter Age.

'Tis high time therefore now for us, to ſhake off that yoak of Phantſies, under which men have ſo long been held in a

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pedantick Compliance; in order whereunto, give me leave to set down what Principles and Particulars hitherto received, ought to be exploded out of the Doctrine and Practise of Physick.

What ought to be excluded out of the Faculty of Physick.

1. Away with the frigid Notion of *four Elements*, which he, out of *Aristotle*, makes to be the Principles of all mixt Bodies, and frames Conceptions about this, agreeable to the Sence of *Hippocrates* in that very vain Book Entituled *De Principiis*. There is a very short, but sufficient Character given of this opinion by Dr. *Willis* in the first Chapter *De Fermentatione*. As touching the Four Elements, and the *First Qualities thence to be deduced, I must confess* (saith he) *that this opinion doth in some sort conduce toward an explaining of the* Phænomena *of Nature, but in so gross a manner doth it solve the Appearances of things, and without any peculiar respect to the more secret Recesses of Nature, that it is almost the same thing to say a House doth consist of Wood and Stones, as a Body of four Elements.* Instead of these the Doctor introduceth Five Principles of mixt Bodies, *viz. Spirit, Sulphur, Salt, Water*, and *Earth*, affirming, that according to their diverse motion and proportion in Bodies, the reasons and varieties of the Ge-

neration and Corruption of things, especially of Fermentation, are to be considered. These Principles he doth not set down as most simple Beings altogether uncompounded, but as such Substances onely, into which Things Natural and sensible are finally resolved as into Parts. By the combination and intestine Motion of these, Bodies are generated and do augment; by the mutual seperation of them from one another, and dissolution, they are alter'd and perish. In the mean while, those Particles which are added to the Subjects, or that come from them, appear under the Form of *Spirit, Sulphur, Salt*, or one of the other two: And that these Particulars, being real, are much more subserving than the other, to gratifie mans Intellect with a right Apprehension touching the nature of mix't Bodies, is evident to the eye of every one that takes pains to Analyse them by fire, and resolve them into their Principles. This suits exactly with my Lord *Bacon*'s design, of raising a Philosophy from *sensible experiments*, if we would have it certain, and really conducible to an understanding of the Nature of man and of Diseases. Concerning the various Affections and Combinations of these Principles

ciples in Bodies, the ſaid Doctor in his * ſecond Chapter, gives a very notable and Demonſtrative Account: to which Scholars are referred. But that the Engliſh Reader may clearly underſtand what is meant by theſe *five Principles*, I referr him to Monſieur *le Febure* the Kings Chymiſt, in the firſt part of his Book, entituled *A Compleat Body of Chymiſtry*, newly Printed for *Octavian Pulleyn Junior*; which will eaſily inform the Ignorant, ſatisfie the Doubting, and convince others.

* *De Fermentatione.*

II. After the *four Elements*, away alſo with the *four Qualities* which are attributed thereto; I remember, the noble Lord and Philoſopher * before-mentioned, will not ſo much as allow the Term *Quality* to be a tolerable Notion, in order to the underſtanding of the Concernments and Operations of Nature, and he totally excludes the Notions of *Humidum* and *Siccum*, *Moiſt* and *Dry*. And *Helmont*, * Pag. 316. ſhews what miſchief the admitting of theſe cauſeth in the cure of Diſeaſes: In *Page* 136. he ſaith, *Moiſture and Drieneſs are not to be underſtood to be Qualities* in Abſtracto, *but they are rather Bodies qualified; and therefore* (*by the leave of the Schools*) *they are not acquired by Parts and Degrees, after the man-*

* *Novum Organon*, Aphoriſm. 15.

* *In the Latin Copy.*

ner of Qualities. Water never dries, though it ſeem ſo to the eyes by vaniſhing: And Drie ſounds nothing elſe properly but to be without moiſture, and ſo conteins nothing but a Negation of Moiſt. It is a wondrous piece of Folly then, to dream, that Moiſture comes on by degrees, and a remiſſion alſo of Moiſture and Drieneſs in Elements; and ſo tis a monſtrous whimſie to have introduced ſuch kind of ſtupid Dreams into the Nature of Diſeaſes, and Rules of Curing, and thereupon to have laid the whole Foundation of Phyſick, by making divers marriages of Moiſt Drie, Hot and Cold, with each other; and all this, to uphold the vain doctrin of Temperaments; not conſidering that in Nature there is no penetration of Moiſt with Dry, no radical union or commixtion or Temper poſſible betwixt them. Then as for the other Qualities (ſo called) *Hot* and *Cold*, *Helmont* * cites the ſaying of * *Hippocrates* to caſhire them; *That neither Hot, nor Cold, nor Moiſt, nor Drie, are to be reputed Cauſes of Diſeaſes; but rather that which is Acid, or Bitter, or Sharp, or Saltiſh.* To this purpoſe alſo *Hippocrates*, in his Book *De Veteri Medicina*, ſpeaking of a Fever, mentions the nature of it much otherwiſe than *Galen*; ſaying, that men *in a Fever have it not abſolutely*

* Plenit. pag. 340

from

from Heat (as the other is pleaſed to define it) *but you are to conſider Bitter, Acid, and Saltiſh, joyn'd with the Heat, and innumerable the like; and ſo in like manner, not to conſider Cold of it ſelf, but as it is conſociated with thoſe Faculties.* He lays not the ſtreſs of the nature of Diſeaſes upon *Qualities*, but upon the other Particulars, though *Galen* be ſo bold as herein to leave his Leader; but *Heurnius*, upon the foregoing Text, a more ſober Commentator, is very plain, and ſaith, *Calidum & Frigidum principatum non obtinent inter Morbificas Cauſas, nec Medicam manum valdè implorant, Hot and Cold have no prehominence among Cauſes of Diſeaſes, * nor do they much require the hand of a Phyſician:* And if theſe be ſo little to be regarded, what will become then of moſt of *Galen*'s Doctrin, and his Medicins, and the Doctrin and Medicins of his ſucceſſors, and of the Shops at this day, which are all proportioned (for the moſt part) according to the Notions and Degrees of *Heat* and *Cold*? In another Text of the ſame Book alſo, *Hippocrates* was ſo prudent, as to adviſe us to have a regard to that in man which is *Bitter, and Saltiſh, and Sweet, and Acid, and Auſtere or ſour, and Inſipid, and Infinit other*

* *Nec Medici manum valdè implorant.*

things having all manner of Faculties, power, and ſtrength: which is one of the beſt Sayings to be found in that Author. And two or three Texts before that, he ſaith, *Non enim Calidum eſt quod eximiam per ſe vim habet; Inter cunctas autem facultates, languidiſſimam eſſe exiſtimo Frigiditatem & Caliditatem*; that is to ſay, *Heat hath not of it ſelf any conſiderable force, but among all the Faculties, I think Cold and Heat to be the moſt languid*; and yet the Frame of Galenick Phyſick ſeems (for the moſt part) to be built upon *Hot* and *Cold*, and a tattemperation of theſe with *Moiſt* and *Drie*, therefore both the Method and Medicins deviſed in proportion to thoſe Conceits, muſt needs be erroneous and inſufficient,
Pag. 239. while *the Schools do* (as * *Helmont* ſaith) *perverſly traduce the Seminal and Specifick powers of Things into Elementary Qualities, from whence they raiſe their Doctrin of Temperaments, and to theſe they unadviſedly refer and aſcribe the Vital and Seminal Faculties of Things.* By ſuch narrow poor Conceptions as theſe, *Galen* corrupted the Art of Phyſick, and the *Arabians* imitated him; ſo that (as I ſaid) a Method of Curing, and of Compoſition of Medicins, hath been founded upon a mere mingling,

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confounding, and jumbling of pretended Contraries, to bring them to agreement and concord, as it were by Mathematical Rule of proportion: That is to ſay, the whole Fabrick of Natural Science hath hitherto ſtood upon mere opinions obtruded on us by groſs Heathens, upon whom it is a ſhame to hear what high Elogies are beſtowed by ſome of their Chriſtian Commentators, calling them Divine, *Divine Hippocrates, Divine Galen,* and I know not how many more Titles more fit for God than men; whereas theſe Maſters extended their knowledge and their ſearches after it, no farther than the external ſhadows of things, ſeldom looking *intra Corticem*, to the *Ferments*, the *Digeſtions*, *Seminals*, and other Particulars of high moment, but placed all the energy of Nature in Fictions about the Diſagreements, the Oppoſitions, the Velitations, the Contrarieties of *Heat* and *Cold*, *Moiſt* and *Drie*. By this means the idle ſort of Gownmen that have imitated them ever ſince, lazing in their Studies over the Pagan Books of Inſtitutions, ſeeing the Road open and eaſie before them, and that they might this way quickly get to their Journeys end of Scarlet, and Worſhip, and Profit, without ſo much

much as wetting, or ſmutching, or burning a Finger, have made very little Advance of the Art they profeſs, but ſtudied their own eaſe, never diving farther into the Depths of Nature, the Differences, the Cauſes, and the Proprieties of Bodies, which it is impoſſible to attain without an Inſight into *Pyrotechnie*, that is, working a knowledge of things Natural out of the Fire.

This is it which (Mr. *Boyle** well ſaith) may, *as the Handmaid to Phyſiology, not a little contribute to clear up the nature of Digeſtions, and the Deficiencies or Aberrations in them, which produce a great part of Diſeaſes. Indeed, ſince the Liquors contained in the Bodie abound, divers of them, with Saline or Sulphureous Parts, he that hath by Chymiſtry been taught the nature of the ſeveral Salts and Sulphurs, and both beheld and conſidered their various Actions one upon another, and upon other bodies, ſeems to have a conſiderable help to diſcourſe groundedly of the Changes and operations of the Humors or Juices contained in mans bodie; which he hath not that never had* Vulcan *for his Inſtructer.* And Page 30. 31. he ſaith, *the Explications of a skilful Naturaliſt may add much to what he hath hitherto been commonly taught,*

* Experiment. Phiſoſ. part. 1. 35. 36.

taught, concerning the nature and origin of Qualities in Physicians Schools; and that a little comparing of the vulgar Doctrin, with those various Phænomena *to be met with among Natural things, will easily manifest it to you. Much more likely explications, than those which were applauded some Ages since, of divers things that happen as well within as without the Body, have been given by later Naturalists both Philosophers and Physicians. The Theory concerning that disease the Stone, and of many other diseases which hath been given us by those many Physicians, that would needs deduce all the* Phænomena *of diseases from Heat, Cold, and other Elementary Qualities, is inferior to the account given us of them by those ingenious Moderns that have applied themselves to* divers Inquiries, *together with some of the more known Chymical Experiments.*

But that ingenious person, Monsieur *le Febure*, Royal Professor in Chymistry to his Majesty, and Apothecary in ordinary to his Houshold, having (as I hinted before) lately published a Book Entituled *A Compleat Body of Chymistry*, dedicated to the King, is somewhat more plain, and noteth * such *Galenists to be only Physicians*

* Pag. 108.

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in name, who after they have perused some University Writings, do perswade men, that Physick is nothing else but an Art of discerning Heat and Cold, and immediately take upon themselves the Practise, and fill their discourses with nothing else but Notions of Heat and Cold; and all their skill tends to speak more or less of these Qualities. *But the learned* Fernelius, *who was the Ornament of his Age, doth confess and evidence, after having acknowledged this Error, that besides these first Qualities, there are many other powers hidden in mixt Bodyes, which he plainly signifieth toward the latter end of his second Book* de Abditis rerum Causis, *where he plainly teacheth how the Seminal Vertue contained in Compounds, and which really is the Seat of all their activity, must be extracted.* Moreover, in his *Preliminary discourse* before that Book, he saith, *'tis a very difficult matter for any to attain the exact knowledge of Natural Things, without the previous guidance of Chymistry, and a being acquainted with all its Parts; neither can any be reckoned a perfect Physician without the help of Hermetick Philosophy, since it is the truest Ground of Physick, without which no Practitioner can deserve any other Title than that of Empe-*

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rick: For, it is not a Gown, or Degrees taken in Universities, which constitute the Physician, but a solid Knowledge of Nature, grounded upon sound Reason and mature Judgement, improved by Practise and Experience. The rare Prescriptions of Chymistry have their Remedies grounded, not upon the actings of first *and* second Qualities, *but upon the Specifical and Internal vertues of their Principles.* Doubtless there may under a Gown, and in an University, be as great a Knowledge of things Natural, as there is in a Royal City; and this the excellent Dr. *Willis* hath sufficiently shewn, as some others his Compeers have also done, by their own personal worth and Industry; but then, the means to attain it, is not in the old lazie way, and by the old dull Principles; for, here lies the Bane of our Profession, that because a Book-knowledge of *Hippocrates*, *Galen*, and the rest that are counted Classick, is admitted in the Universities as a sufficient Test, to try a mans fitness to become a Doctor of Physick, therefore the less ingenious spirits content themselves with that sort of Learning, and seldom seek after the other; or if they do, they rest in a superficial Acquaintance with

with the use of some common Chymick Remedies which are to be had at the Apothecaries; whereas the case would be otherwise, and much more for the Advantage of mankind, and of the Art of Physick it Self, if the world were divided betwixt *Galen* and *Helmont*; that is, that they who take degrees in the faculty, should by publick Constitution be Obliged, to give a Proof of their Sufficiency, in the Doctrin of the One as well as the other; and in the Analytick Operations of Chymistry, as well as in the Peripatetick Speculations and Maxims of *Galenism*; for, though these cannot render one the better Physician to cure, yet they make him the more accomplished, because he is acquainted with the ways both old and new: which very well agrees with that saying of the prudent *Celsus*, who tells us, *tis true, that as to the Art of Curing nothing avails more than Experiment; and although there be many things not properly appertaining to an Art it self, yet it may by those things be advanced in quickning the wit of the Artist. Therefore also, that contemplation of the Nature of things, although it make not a man a more apt Physician, yet it renders him*

* *In Præfat.*

him the more compleat for the Profeßion: That is to say, in plain *English*, a Doctor bred up in the Contemplative Philosophy of the Schools, may be a Scholar and a very fine Gentleman; but what is that to the Curing of a Disease, or the rousing of a Heart-sick Man from his bed of Languishment? This is to be expected rather from one that is qualified for the work by acquaintance with Mechanick and *Experimental Philosophy*. Therefore very much to the purpose is that other saying of the same Author, who, though he appear to favor the Sect of the old Empericks, yet hath, for his gravity and great Sufficiency, gained this Acknowledgment from many Admirers of the old Learning, that he is to be ranked next to *Hippocrates*: his words are to this Sence: * *It is not so much matter, what moves the Arteries, as what all kinds of Motion doe signifie: but those things are to be known by Experiments; and in all kind of Speculations men may dispute* Pro *and* Con; *and so a good wit and quaint Discourse may overcome; but know that Diseases are not cured with Eloquence, but by Remedies: Which if any man that is an Experimental Practiser come to know, though he be*

* Celsus in Pre.

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ſlow of Tongue, he will become a much greater Phyſician, than he that without ſuch an Experimental Courſe, ſhall ſeek to adorn himſelf with an eloquent Tongue. And truly, this is the moſt conſiderable qualification that a man may arrive to by *Galenick Philoſophy*; i. e. to manage a diſcourſe about fruitleſs Notions with Elegancy. With this weapon the Tongue, tis likely *Galen* himſelf prevailed over all the other Phyſicians in the Court of the Emperor *Antoninus*; for, he that writes his life deſcribes him to be a very eloquent perſon, and that is a grand advantage to any man in the Courts of Princes. And yet for all his height of Eloquence, we ſee his Principles to be but ſtreight and ſhallow; particularly, theſe concerning *Elements* and *Qualities*, which *Hippocrates* ſpake but faintly for, and *Celſus* doth not vouchſafe once to mention. And Mr. *Boyl* ſaith, well, that * he *ſeeth not how from thoſe narrow and barren Principles of the* four Elements, and *the* four *firſt* Qualities, the *four* Humours *(and the like) any ordinary effects can ſatisfactorily be deduced*: And if ſo, then certainly the *Scholaſtick Method and Medicins* erected upon ſuch Scholaſtick Foundations, cannot in reaſon ſtand any

* *Experim. Philoſ. p. 281. part 2.*

any longer, but ought to be turned up as Insufficient, and of little use, in an Age wherein better things are known. So much for *Qualities*: And yet let me have one fling more at them, which is this: That the admitting two of them, *viz.* the Notions of *Heat* and *Cold*, into the Doctrin touching *Fevers*, is a Cause why at least a third part of the Sick doe run a strange hazard every year of losing their lives; or else miserably languish and lose the habit of their Bodies, by the ill handling of them and *Agues*.

III. The common Figment of *Qualities* being cashired, the Galenick Doctrin also concerning *Temperaments* falls to the ground of Course, because it depends thereupon; and so I slightly pass it, as not only useless, but dangerous, because it casts many a Mist before the eyes of men, about the regulation of Diet, as well as the Curation of Diseases.

IV. After *Elements*, *Qualities*, and *Temperaments*, the next Considerable is the old Notion of *four humors*, which they reckon to be Ingredients in the Constitution of the Bodies of Animals: This Conceit, as vain as the rest, passeth yet among the vulgar, both Physicians and others, who

conclude that the humors floating in the Maſſe, ought to be acknowledged by the Names of *Bloud*, *Choler*, *Phlegme*, and *Melancholy*; and from theſe they derive four *Complexions*, viz. The *Sanguine*, the *Cholerick*, the *Phlegmatick*, and the *Melancholick*; and out of theſe they fain alſo as many Complicated Complexions, according to the predominancy of one humor over another; which are too frivolous to be named. Therefore I paſs them by; and the rather, becauſe * Dr. *Harvey*, whoſe Excellency lay moſt in Phyſiological diſcourſes, puts a ſlur upon this Principle of *four Humors*, ſaying, *If theſe things be ſo, then there is a neceſſity that the maintainers of this opinion muſt ſet down two kinds of Bloud*, viz. *the whole Maſs together in the Veins, compoſed of thoſe* four Humors, and *a fourth part of it more pure, more florid, and more ſpirituous, which in the ſtricter ſence they name Bloud, and which ſome affirm is contained apart in the Arteries, and therefore ſeperated from the reſt for other uſes*: the ridiculouſneſs of which conceit concerning two kinds of Bloud, is plain enough from the received doctrin of the Blouds Circulation, ſeeing it is one and the ſame Maſs of Bloud, which fetches

* *De Generr. Animal. Exercit.* 52.

fetches its Round, flowing out from the Ventricles of the heart, by the Arteries, unto all parts of the Body, and from thence back again through the Veins to the Ventricles of the Heart; which reciprocal Motion being continual, it is not to be imagined, that any one part of Bloud distinct from the other, can be contained in the Arteries, but that it is the entire Masse which flows in that Circulatory Motion; and as it passeth along, it purgeth it self of its Feculencies by the common Emunctories of the Body, which Feculencies being diversified in colour and Consistence, according to the variety of their nature and condition, have gotten the Appellation of four distinct humors, as if they were so many parts, and sometimes, as if they were so many Excrements of the Mass of Bloud; And so according to these gross Conceptions, the *Galenists* have formed all their Notions about Pharmacy, aiming at an evacuation, or else a contemperation of supposed Humors, and Excrements; but there being no such matters as they Phantsie to be Ingredient in the nature of Diseases, tis no Marvel if they miss the Curing of any Disease, which is not curable by Strength

of Nature, and Length of Time.

As for *Melancholy* (as they call it) the Receptacle which they beſtowed upon it was the *Splene*, pretending that its office is to ſeperate the Droſſie part of the Bloud, which cannot be elaborated by the Liver, which Veſſel they deſtinated to the purer part of Sanguification; but both theſe Opinions have of late been ſufficiently diſproved by the ingeny and induſtry of ſome ſearching heads, who determine the Liver not to be the office or Storehouſe of Sanguification; and the Splene to a nobler uſe than to receive droſſie Bloud, it appearing rather to be an Elaborator and Fermentator of the nobleſt Juyce, *viz.* the *Arterial* Bloud, by reaſon of that grand Intertexture of Arteries, by which it holds a near Communication with the vital Parts of the Body. Concerning which read *Bartholinus*, *Walæus*, and our moſt ingenious Dr. *Highmore*, and others, who have well improved the hints that are given by *Helmont*.

As for *Choler* or *Bile*, they have hitherto reckoned it alſo to be an Humor; and nothing hath been more talked of than Bilious or Cholerick Complexions and Diſeaſes, till *Helmont* opened the eyes of

of the world, and ſhewed, that *Bile*, which the *Galeniſts* make the parent of almoſt all active Diſeaſes, is not an Excrement, but rather a Condiment, and Balſamick Preſervative of the bloud in its due vigor and activity; and that the fetid Cadaverous yellow excrement, which we find frequently avoided in Evacuations upward, or downward, is ſometimes a good Juice or humor, vitiated, and tinctured yellow, and drawn out of the Bodie, by common ill natur'd Purgers; and ſometimes a part of the Chyle corrupted, which comes forth either yellow or Sea-green, being Tinctured ſo, more or leſs, according to the Degree of that Corruption which hath ſeized it.

Agreeable to this Doctrin of *Helmont*, the Learned * *Grembs* hath determined the nature of *Bile*, and of that corrupted Juice which reſembles it; and of late, *Sylvius de le Boe*, in his Diſputations at *Leyden* in *Holland*, ſhews that the Liquor or *Bile* contained in the *Gall* is not what Phyſicians commonly have defined it, but that it is * a part of that nobleſt Liquor, the *Arterial Bloud*, conveyed by the *Cyſtick Arteries* into that little thin receptacle the *Gall*; and that for the main, it conſiſts of a *Lixivious*

* *Lib. 1. ca.* 8.

* *Diſput. Med.* 6.

vious Salt, mingled with a mean quantity of Sulphur or Oyl, and a *volatile Spirit*, by which it is endued with a notable power of penetration, so that it effects wonderful operations within the Bodie, and keeps it from corruption; having in it self the nature of a Ferment, by vertue whereof the blood is maintained in an active state of Circulation, the work of the several Digestions is promoted, and the respective Ferments of every part and Vessel of the Bodie invigorated and quickned. Vain therefore are the old Speculations touching those many Diseases which have hitherto been owned, as proceeding from a redundance of Bile; and all the Remedies founded upon this Figment of a *Bilious Humor*, are either pernicious, or else useless to the end for which they are administred. The truth is, the Fabricators of the Four Humors may as well make them up *seven* or *eight*, by adding the *Liquor Nervosus*, the *Serum*, the *Urin*, and the *limpid liquor of the Lymphaducts*; and I see no reason but they may as well add *Spittle*, *Snivel*, and *Tears* (for they are all of a different appearance;) however they may do well to add Tears of repentance, rather than fool the world any longer with such

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Phantſies, the admitting whereof runs the Precious lives and healths of men into many a hazard.

To be brief therefore upon this ſubject, I will ſay little more, as from my ſelf; but ſeeing Doctor **Willis* hath very excellently truſs'd up all that is conſiderable in a narrow compaſs, I will render it as plain as I can to the Engliſh Reader. *Though this opinion of the Four Humors hath ever ſince the daies of* Galen *prevailed in the Schools of Phyſick, yet in our Age men begin to ſuſpect it; nor is it ſo commonly made uſe of to ſolve the* Phænomena *of Diſeaſes; becauſe ſuch kind of Humors do not conſtitute Bloud, but thoſe that are called ſo are (excepting the Bloud) only excrements of the cruentous gore, which ought to be ſeparated from it: For, the bloud is in truth one only humor, nor is it one thing about the Bowels, and another in the habit of the Bodie; nor is Phlegm moved at one time, and Bile at another, or Melancholy (as the vulgar talk) but the Liquor boyling within the veſſels is only Bloud, and whitherſoever it is carried through the ſeveral parts of the bodie, it is ſtill the ſame, and like it ſelf. But becauſe in ſome perſons, by reaſon of the abundance of Natural heat, and through want of the ſame in others, the concoction of Aliment is ſome-*

* De Febr. Cap. 1.

times more effectually, ſometimes more remiſſly, performed both in the Bowels and in the Veſſels, therefore there followeth a diverſe Temperature of the Bloud, although it be one and the ſame liquor, and according to its conſtitution, it may be ſaid that men are either Cholerick, Melancholick, or of ſome other Temper. Moreover, becauſe while the Bloud circulates within the veſſels, ſome parts of it continually grow old and ſtale, and others are ſupplied anew, hence it is, that from crudity, or too much coction, ſomewhat excrementitious muſt needs be heaped together: which nevertheleſs is by effervescencie ſeparated from its Maſſe, even as it happens in the efflorescence or depuration of Wines; and ſo the Bloud being after the ſame manner depurated, ought to be of it ſelf without that which they call Bile, Phlegme, *and* Melancholie. *And whereas thoſe humors vulgarly ſo called do conſiſt of other Principles,* viz. *that which they term Bile or Choler, of Salt and Sulphur, with an admixtion of Spirit and* Water; *and that which they term* Melancholie, *of the ſame, with an Addition of* Earth; *and ſeeing that of ſuch Principles as theſe the Blood doth immediately conſiſt, and is wont to be ſenſibly reſolved into the ſame, I judge it better to lay aſide the vulgar acceptation of* Humors, *and*

to

to take into uſe theſe celebrated Principles of the Chymiſts, for explaining the nature of the Bloud and of its Diſtempers. There are therefore in the Bloud, as in all other Liquors which are apt to Ferment, very much of Water *and* Spirit, *a Mediocrity of* Salt *and* Sulphur, *and ſome little of* Earth: *and when the Bloud is reſolved by putrefaction, it yields the ſame Principles ſeparate, and Diſtinct.*

And becauſe tis neceſſary, the Reader ſhould have a little proſpect into the nature and meaning of theſe *Five Principles*, he ſaith, that *Spirit is a ſubtile and moſt volatile portion of the Bloud. By the effervescencie of this it is, that the Bloud is kept in a continuall Ebullition and Motion, and purified from whatſoever happens to be mingled with it which is Heterogeneous or unapt for mixture, or elſe the Spirit being thereby diſturbed in its Motion, there follows an exagitation of the Bloud, and a Diſtemper, which never ceaſeth, till the Heterogeneous matter be either ſubdued and reduced, or elſe evacuated. This Spirit, in diſtilling the Bloud of Animals, becomes viſible] aſcending of a clear limpid colour, like* Aqua Vitæ, *and by the adheſion of Salt it becomes very ſharp and pricking.* Spirit.

That

Sulphur. That Sulphur *also abounds in the Bloud, appears, in regard we feed chiefly upon fat Aliments and such as have* Sulphur *in them; yea the Nutriment accruing to the solid parts from the Bloud, turns into Sulphur and Fat; and it is probable, that from the dissolution of this it receives its red Tincture: Hence it is, that the bloud being impregnated with Sulphur, as well as Spirit, the whole Masse is very apt to Ferment; and it passing through the Heart, receives there a greater effervescencie or accession, to maintain vital heat in the whole Bodie. And when this Sulphureous part is exalted, and becomes luxuriant in the Bloud, it perverts the Temper thereof from its due state, rendring it bilious or Cholerick* (as we call it) *or corrupt, so that it cannot concoct the Nutritive Juice; or inflaming the Bloud, it puts it into Heats and Burnings, as in Continual Fevers; and hence it is, that the more of* Sulphur *any one hath in the bloud, the more apt he is to fall into Fevers,*

Salt. That a Salt *also is in the Bloud is evident by Taste: That which is the* Fixed Salt *comes by feeding upon Vegetables; and the* lesse volatile Salt *from other kinds of Food, which by a good Digestion of Nature, and by circulation, attains to be Volatile. Now if it so happen*

pen in the Bloud, that by reaſon of ill Digeſtion, the Salty or Saline particles thereof are not rightly exalted, but remain crude, and for the moſt part Fixt, thereupon the bloud becomes thick, and unfit for Circulation; from whence come Obſtructions in the Bowels and ſolid Parts, and an encreaſe of ſerous Crudities; But if by a Depreſſion, or through defect of Spirit, the Salt becomes too much exalted, and fluid, the ſtate of the bloud become acid and auſtere, as is obſerved in the Scurvy and Quartan Agues, yea and various Coagulations of Salt hapning upon this account, thence ariſe all manner of Arthritick Diſeaſes, the Scrophula, Nephritick Diſtempers, Leprous Diſpoſitions, and almoſt all Chronick Diſeaſes: But when the Salt, after concoction well performed in the bowels and and veſſels, is duly exalted, and by aſſociation with the Spirit *made volatile, then, by reaſon of its mixture, the Liquor of the bloud ferments the more equally, and is vindicated alſo from Putrefaction, and from Stagnation,* (that is to ſay, defect of motion) *and from Coagulation: For, the Saline particles do reſtrain the exorbitances of the Spirits, and eſpecially of Sulphur: wherefore they who have a bloud well ſaturated with volatile Salts, are the leſs ſubject to Fevers: and from hence is*

is, that they who frequently let bloud, are the more inclinable to Fevers.

Earth. *That* Earth *or terrestrial Particles abound in the bloud, appears by the grosness of its humor, and thickness of its Consistence. This serves to keep the bloud from becoming too volatile, and from being too soon inflamed; even as in the ordering and making of Gunpowder, Coals are many times added in greater proportion, that its parts may not all at once and too soon take fire. And* that there is such an *Earth, appears also in the Distillation of Bloud, after which you will find good store of that the Chymists call* Caput Mortuum, *a light Earthy substance apt to crumble.*

Water. Lastly, *that there is a* Water *or* Watery part *of the Bloud, is seen by its Fluid nature; for, by this it is kept from being Stagnant or without Motion, and is circulated in the Vessels without thickning, and withheld from too much Conflagration and Adustion, and the Heat is preserved in good Temper. This also is made manifest in the Distillation of Bloud, whereby there is educed a Water limpid and insipid, of at least a double proportion in respect of the rest. From hence the matter of Urine, Sweat, and of any of the other moist Excrements, doth for the most part proceed.*

Now

Now this being ſo, what remains, but that the ingenious Reader ſhould lay theſe two Doctrins together to compare them, and thereupon judge which is moſt likely to direct men in underſtanding the nature of man's Bloud, and of Diſeaſes ariſing from its Diſtemper; whether that old Fiction of *Four Humors*, which I have ſhewn to be frivolous; or whether this new Notion of the nobleſt Sect of Philoſophers and Phyſicians, ſetting forth *Five Principles* in the Bloud, which are demonſtrable to the eye, therefore moſt apt to inform a Phyſician how to apprehend the Cauſes of every Diſtemper, as they ariſe from true and genuine Fundamentals of humane Bodies, and conſequently how to invent Remedies to quell thoſe Cauſes, and remove them.

And as to the invention of Remedies alſo, it is not to be imagined which way men can go rightly to work, without a like conſideration of the ſame *Five Principles*, which are as demonſtrable alſo to Sence, in reſolving mixt Bodies, whether *Animal*, *Vegetable*, or *Mineral*, into their ultimate Ingredients or Parts, by Pyrotechnie and help of the Fire. For, as Monſieur *le Febure* (the Royal Profeſſor of Chymiſtry)

well ſaith, *After that the Artiſt hath performed the Chymical reſolution of Bodies, he doth find at laſt Five Subſtances, which Chymiſtry admits for the Principles or Elements of Natural Bodies, whereupon are founded the Grounds of its Doctrin, becauſe in either of theſe nothing Heterogeneous can be found*; and they are, 1. *The watery part, which they term* Phlegm. 2. *The Spirit, termed alſo* Mercury. 3. *Sulphur*, or Oyle. 4. *The* Salt. 5. *The* Earth. Some give them other Names, and tis free for every body to put what name they pleaſe, provided they agree in the Things or Subſtances.

The Nature and uſe of the five Principles.

Three of theſe ſubſtances offer themſelves to our ſight in a Liquid Form, *viz.* the *Water*, the *Spirit*, and the *Oyle*: the two other, in the form of a ſolid Bodie, *viz.* *Salt*, and *Earth*. The uſe of the ſubſtance called *Water* is, to be as a curb and bridle to the *Spirit*, to dull and take off its acuteneſs; and to diſſolve the Salt and weaken its corroſive acrimonie; alſo to hinder the Inflammation of Sulphur, and unite the *Earth* with the *Salt*; for theſe two laſt ſubſtances, being brittle and dry, would give but little firmneſs and conſiſtencie to a mixt bodie, without the help of the *Water*.

The

The next conſiderable thing drawn by fire out of the Compoſition of Mixt Bodies being the *Spirit*, obſerve that the nature of it is very penetrating, and the uſe of it is, to cut, open, and attenuate the moſt ſolid and fixt ſubſtances; it excites heat in Fermentation, untieth the Bonds of *Salt* and *Sulphur*, and makes them ſeperable, reſiſts Corruption and Putrefaction, yet by accident may be the cauſe of it; devoureth the *Salt*, and ſeizeth ſo greedily on it, that it can ſcarce be parted from it, but by extreme violence of the Fire: It is poſſeſſed of its own heat and cold (ſo appearing accidentally by its effects) for it doth not act by the common Elementary, but by its own proper Specifick Qualities. This ſame *Spirit* communicates ſeveral noble Qualities to the *Water*, preſerves it from corruption, makes it penetrative, and endoweth it with almoſt all its own activity: And in requital, the *Water* doth ſoften and bridle the fury of the Spirit, and makes it ſo tractable, that it may become uſeful a thouſand wayes: It is very ſerviceable while it remains in a due Harmonie, hindring the growth of excrementitious matter in mixt Bodies, multiplying the ſubſtance, and ſtrengthning the Faculties

ties and Powers both in Animals, Vegetables, and Minerals. But if it exceed the condition of the mixt wherein it is, it alters the whole Frame of it, and becomes a Principle of deſtruction.

The third thing viſible in the artificial reſolution of Mixt Bodies is *Sulphur*, appearing in the form of Oyle; and becauſe it is an Oleaginous ſubſtance, it eaſily takes Fire: It ſwims above the *Water* and the *Spirit*, becauſe it is lighter and more Etherael: It reſiſts Cold, and never congeles, being the Principle of Heat: It never ſuffers Corruption, but preſerves from it ſuch things as are immerſed in it, preventing the penetration of Air: It ſweetens the Acrimonie of the Salt, by whoſe help it is fixed and coagulated: It powerfully blunts the ſharpneſs of Spirits: Its office is, to bind and temper the *Earth* with the *Salt* in the frame of Mixt Bodies: It cauſeth alſo a ſtrict union of the other Principles, moderating the too great drineſs of *Salt*, and the Fluidity of *Spirit*; and finally, by its means the other Principles do cement each other, and enter into a tenacious compacted ſubſtance.

The

The Fourth Principle educed by Pyrotechnie is the *Salt*. Without this and the *Earth*, the three foregoing Principles being volatile (as appears in Chymical operation by their flying the Fire) would be unable to indue the Mixt Body with a solidity requisit for its duration. The *Salt* being separated from the rest, offers it self to our Senses in a drie crumbling brittle Bodie, easily reducible to Pouder, a sign of its external Drieness; but it is endued also with an internal Moisture, as is witnessed by its Fusibility. It is fixt, and incombustible, resisting the Fire, wherein it grows purer, suffers no putrefaction, and is as it were eternal, being able to preserve it self without alteration. It is easily dissolvible in Moisture, and being dissolved bears up the *Sulphur*, and joyns it to it self by the assistance of the *Spirit*. The use of it is, to hinder Fire from consuming hastily the Oyle: but if it exceed, or grow exorbitant, it corrodes and destroys with its acrimonie whatsoever the other Principles or substances can produce, or would preserve.

The last of Principles is the *Earth*, a naked substance, devested of all manifest qualities, except Drieness and Astringencie.

It's uſefulneſs in Mixt Bodies is, by union with the *Salt* to cauſe Corporiety, and compactedneſs, taking in to it's aſſiſtance ſo much of the liquid Principles as is neceſſary for the Compoſition. By this Deſcription of theſe *Five Principles*, you may perceive, that you are not to underſtand common Water, nor Spirit, nor Sulphur, nor Salt, nor Earth, in the ordinary acceptation, as if the Sulphur and Salt, *&c.* were the ſame that are every day in Domeſtick uſe; but only in an Analagous Sence, in regard of the likeneſs and correſpondency which they have with thoſe common ſubſtances from which they are denominated; for, upon this account only thoſe names are taken up.

Upon the whole matter therefore, it is evident, that the Bloud and Body of man, and of other Animals, and the Bodies of thoſe Vegetables and Minerals, *&c.* of which Remedies are made, have one and the ſame ſubſtantial Principles whereof they are conſtituted, and into which they are to be reſolved only by the Art of Chymiſtry, and the knowledge of them cannot be ſenſibly manifeſted by any other means; therefore ſeeing the new Doctrinal Principles of the *Helmontians* or Chymiſts,

miſts, are exactly conſenting with thoſe ſubſtantial Principles of Bodies, which by Arte are made obvious to our Sences, and manifeſtly one and the ſame, it is left to any indifferent man to judge, which of the two ſorts of Principles are moſt conducible to the Practiſe of Phyſick; whether the old ones, founded upon *Four humors*, which are no Parts of us: or the new Ones here enumerated, which our Sences, by the help of *Chymiſtry*, Demonſtrate to us, to be Parts really ingredient in the Compoſition of our Bodies.

And as touching the Invention of Medicins proper for the Caſe of every Patient, certainly he who is able, by acquaintance with the operations of Nature, to comprehend the *Phænomena* which uſually follow the Exceſſes and Defects, the Exaltations and Depreſſions, Fixations and Volatilifings, Digeſtions, Fermentations, Meteoriſms, and other Motions (exorbitant, or regular) of any of the Principles here laid down, muſt not only beſt underſtand the Conſtitutional ſtate of a man's Body, and his Diſeaſe in the Cauſes of it; but likewiſe the Conſtitution and power of every Drug, Mineral, Herb, or Root, &c. that is to be made uſe of for remedy; and

ſo by ſeperating thoſe of the *Five Principles* which are unfit to be continued in the preparation of any Plants, or Minerals, *&c.* or by alrering and meliorating them in the Proceſs, a Medicin and Method of uſing it, may be properly accommodated and ſuited, according to the exorbitancie, or Malignancie of all or any of the ſaid *Five Principles*, which contribute to the cauſation and continuance of the Diſeaſe. For want of this looking to the Internal Principles and Proprieties, both of Diſeaſes and Medicins, it is, that ſo many have been long in Phyſicians Hands as incurable; for, the old Droniſh Stationary Method of Authors leads them to look after ſuppoſed *Humors*, and Hot, or Cold Cookeries of the Shops for Draining them, and a Qualifying or attempering of Qualities, by the *damnable Rule of Contraries*, which is deſtructive in innumerable Caſes, and ineffectual in the reſt that are of any difficulty; And as for the more facile Caſes, which ariſe either from accidental Diſcraſies and Diſorders, or from the inteſtine Motions of Particles in the Maſs of Bloud, at or about the Equinoctial and Solſtitial Returns of the year, or through variations of Weather (wherein moſt of the *Galeniſts* de-

deſire moſt to deal) that ſaying of *Hippocrates* may very well be applied to them, *Naturæ ſunt Morborum Medicatrices*, ſtrength of Nature, a good Nurſe, and Kitchin-Phyſick, after an Evacuation or two, and a little patience, ſets the Diſtemper packing out of good-habited Bodies, but in others the Chronick Diſeaſe only retires till another Seaſon; and ſo, the Incomes of a double Harveſt (Spring and Fall) upon this Account, out of moſt great Families, are very much for the advantage of their learned Worſhips. In the mean while, they have little leiſure, or luſt, to enter upon a courſe for examining old Principles, a rectifying, or caſhiering old Methods, and an accommodating the Profeſſion with new, and new and better Medicaments, by Analyſing the Bodies of Minerals, and making another kind of Scrutinie into the Natures of Plants and other Vegetables, than by conſidering out-ſide Qualities, as *Hot, Cold, &c.* For, tis a ſhame to ſee how little is known of the Inward Eſſences and Proprieties of Herbs, or hath been done about diſcovering the Faculties of the other Medicaments, for theſe two thouſand years paſt: yet the Learned (ſo called) have been content, to let matters go as

they are; and were it not, that God hath given an Induſtrious Spirit of Inquirie to others, whom they upon all occaſions brand, and ſeek to ſuppreſs, little Advancement would be made of the Art of Phyſick in the future; and we ſhould be to ſeek of Noble Remedies, which are now every day in a Courſe of Improvement, and the perfecting of them is exceedingly wanted, for the quelling of thoſe Exotick Venemous Ferments, which get ground apace, and are the Parents of thoſe Monſtrous rebellious Diſeaſes, which ſtart up in new Diſguiſes almoſt every year. So much then for Demoliſhing the old, and receiving new Fundamentals in the Profeſſion of Phyſick.

CHAP.

CHAP. VIII.

An Offer of divers other Particulars Conſiderable, in order to the Practiſe of Phyſick.

NOw leſt any ſhould yet object; this diſcourſe againſt old things doth not ſufficiently eſtabliſh things new in their place; If we give over the Notions about Elements, *Qualities*, *Temperaments*, Humors, and Complexions, in the Bodies of men, and in Diſeaſes and Remedies, we would have ſomewhat elſe that is ſolid whereon to ground a proceeding in Cure, let me (beſides the five Principles already mentioned,) offer unto you ſuch other Particulars as will very much ſubſerve alſo to the purpoſe: In the deſcription whereof I ſhall be but brief, though a great Volume would be little enough to lay them out, in a due proportion to the worth and weight of the matters.

1. There is to be conſider'd in every Thing (Diſeaſes as well as other things) a *Seminal, and Specifick Power*, whereby it

hath a ſubſiſtence, and peculiar Properties and Operations, which diſtinguiſh it from others, and qualifie it, either for a producing its Like, or for exerting its vigour and activity in or upon others; This is the Root, and thoſe that the Schools call Qualities are the Flouriſhes, and indeed but accidental Effects and Products of its force, not manifeſtations of its nature; for, an effect which we call *Hot* or *Cold*, is many times wrought by a thing which is not properly either, but rather as to outward appearance ſeems to be of a nature contrary thereto, as might be made evident by numerous Inſtances: To this it is which Phyſicians ought to have reſpect in the inventing of every Remedy, and the Calculating of every Caſe of Curation that comes before them; and the not knowing, or elſe the not applying themſelves to this, is the reaſon, why relying upon other Notions, they ſo often miſs the mark, ſpending their Inventions in the Culinary Conceits of Heating and Cooling, *&c.* while in the mean time they dig not to the root of the matter, but neglect the Eſſential Quiddities both of Remedies and Diſeaſes; And hence it is, that ſo few Diſeaſes are cured, beſides

thoſe

those which Nature * her self is able to cure, with the help of a little Customary Evacuation, and a few Doctoral Visits, and Chips in Pottage, and Time; which in the common Cases (as I have told you) will do All with the help of such stuff as is usually dispensed in the Shops, because abundance of Diseases there are latent in the Body as to their *Seminal Causes*, which break out, some of course at certain Seasons of the year, others upon certain Occasional Accidental Causes, as Alteration of Weather, Diet, Drinking, and some one or other disorder of Living: and such Diseases do for the most part, with a little patience, and help of Nurses, without that wicked way of *Bleeding*, and other excarnifications, retire of their own Accord, and of their own Accord return again at the like Seasons, or upon accidental Motion of the like Occasional Causes, because Physicians seldom design, or if they would, seldom know how to prescribe Remedies of a Fundamental Nature, such as are able to penetrate and pursue a Disease into its darkest Centre of retirement, and there extinguish his Seminal Power, that he may grow no more upon the Body: And hence

* *Naturæ sunt Morborum Medicatrices.* Hippoc.

hence it is, that the Scholaſtick Road of Practiſe is in tough Chronick Diſeaſes but mere Practiſe, and a running of the Round, to the great diſhonour of ſo noble an Art: And were it not that other men who are too often in contempt term'd Empericks, have had notable ſucceſſes in Curing innumerable Caſes, which others had turned off as incurable, the Credit of our Profeſſion had long ſince fallen to the ground.— The difference betwixt the Scholaſtick men and Us, is ſhortly this; Their Doctrin is founded upon *Elements*, *Qualities*, *Contrarieties*, *Mixtures*, *Humors*, and old Medicins; We inſiſt upon the *Internal Seminal Principles* of Diſeaſes, the *manner of their Production*, their *Cauſes of Adaptation*, their *Affinities*, *Conſents*, *Diverſifications*, and *proprieties*, with a perpetual *Improvement of Medicinal Inventions*, by the Preparations, Exaltations, and Appropriations of the Sublimer and more refined ſort of Remedies; becauſe they may be adminiſtred, and do their work, without reſpect to *Qualities* and *Contrarieties*, aiming at the very Quiddities of Diſeaſes, as they flow from their immediate Eſſential Cauſes. It were endleſs to reckon up the Non Succeſſes

of

of the common Methods and Medicins which are proportioned to the Conceit of *first* and *ſecond Qualities* and Temperaments; Witneſs their Fumes and driers for *Catarrhs*; their Iſſues, their Heaters in *Epilepſies*, *Convulſions*, and *Vertigoes*; their Humectators and Coolers in *Hectticks*; their Analepticks, Nutritive Meſſes, Lick-pots, and Pectorals, deſtructive in moſt *Conſumptions*; their Drainers in *Dropſies*; their Bleeding in *Agues*, *Gouts*, and in many other Caſes; their Binders in *Fluxes*; not to name any more, by which the greateſt part of Patients are very little relieved, or elſe made much worſe. And if it were convenient, a large Catalogue of Perſons might here be inſerted to confirm it: but the weekly miſcarriages upon this Account call aloud for other Methods and Medicins, and another kind of Philoſophy or knowledge in things Natural, than the Scholaſtick ones which have been received of old, to reach the new diſeaſes of this Age in the very Centre of their Proprieties and Eſſentials, and to diſcern them through all their ſtrange Phænomena or Appearances.

2. Con-

Of Digestion.

2. Consider also, that whereas the Schools assign but three sorts of *Concoction*, or Digestion of Aliment; the First in the *Stomack*; the Second in the *Liver*; the Third in *each part* and particle of the Bodie; they are neither copious enough in the number, nor distinct in the Description; for, we cannot but (with *Helmont*) enlarge the *Digestions* as to Number, and specifie them in other Terms. The *First Digestion* therefore we say is in the Stomach; the *second* in the First Gut called *Duodenum*, where the *Felleous liquor* of the Gall mingling with the Chyle, changeth the acidity which was bestowed on it by the Ferment of the Stomack, into another Substance full of Volatile Salt, whereby it is fitted for a further Process. The next Digestion or Concoction, the old Stagers will needs have to be in the Veines of the Mesenterie as preparatory to Bloud, and in the Liver as the Finisher of it; and to this, *Helmont* agrees, but the latter Experiments of Anatomists shew, that the Liver hath no share in that work; and there is cause to beleeve, that the third Concoction is elaborated in the common Receptacle invented by *Pecquet*, which is seated at the Root of the Mesenterie near the Loynes; after

after which it is conveyed by the *Ductus Chyliferi*, near the Back-bone, through the Cheſt, up to the Subclavian Branches of the *Vena Cava*, where it mixeth with the Bloud, and with its ſtream paſſeth to the Heart; and there being impregnated with the noble Ferment of that Veſſel, it becomes Bloud, and puts on the Principles of Vital Power, which I may call the *Fourth Concoction.* The *Fifth Concoction* is in the Arteries, where its Spiritualiſation and vitality is perfected. Then in courſe, according to *Helmont*, follows the *ſixth Digeſtion* or Concoction, performed in all the Members, which the *Galeniſts* made to be the *Third*; but neither of theſe opinions may paſs for current, becauſe before the Bloud is diſtributed to each Part or particle, it paſſeth under more operations and Elaborations, as it circulates through other Veſſels, which I look upon as ſo many additional Digeſtions and Fermentations. The Anatomiſts pretty well agree upon this general Circulation; and tis but reaſon; but in what order, it circulateth, it matters not to our Purpoſe; it ſufficeth me to obſerve, that firſt or laſt it viſits every Veſſel, as the Lungs, the Brain, the Liver, the Splene, the Reins, and the Teſticles,

Teſticles, as well as the other aforenamed; and in every one of theſe it is impregnated with ſome one power or other, which none of the other could beſtow; and ſo out of all theſe Digeſtions in the ſeveral Veſſels, there reſults as it were a conſpiration of Powers, which become all united in one Point of Vitality within the Maſs of Bloud, for the maintenance of a vigorous ſtate of health within the Bodie. Now that which occaſioneth a great Defect in the Practiſe of Phyſick is, that Phyſicians are too narrow and ſhort in their thoughts about *Digeſtions*, and do not conſider the nature of Diſeaſes, as they ſpring out of the Enormities, or the Defects, which are incident to every Digeſtion reſpectively; which is a ſubject too large to be inſiſted on in this Place, but might be very well worth the Diſcuſſing, by any that would ingage his Pen, for Digeſting a new Bodie of Phyſick in a juſt Volume; than which there is not a more neceſſary Work under Heaven.

Of Ferments.

3. Great regard likewiſe is to be had to thoſe Energetical powers which God hath implanted in every Veſſel, whereby the work of *Digeſtion* in each of them is accompliſhed; and theſe Powers or Faculties

ties we call *Ferments* or *Levens*, becauſe though a *Ferment* be but (as it were) *indiviſibile Quid*, a very ſmall Thing, of a Spirituous and almoſt incorporeous Nature, yet it is able to leven, that is, alter and qualifie with a peculiar Tincture whatever is brought to it for that purpoſe, by the appointment of Nature. Thus the *Ferment* or Leven of the Stomack, myſteriouſly ſeated in that part, hath a peculiar Power of Chylification, and may be called the *Maſter Ferment*, becauſe it prepares All for the other; and the ſupreme Moderator of the other *Ferments*, becauſe it hath an Influence for Good or Ill upon them All; for, if this be infirm, the reſt are immediately languiſhing throughout the Body; which made *Helmont* aſſign the Stomack to be the principal ſeat of the Soul; and we ſee, that in ſickneſſes, it is the firſt that is out of order, and the laſt that is recovered. If it ſends away the Chyle imperfectly digeſted, the next offices that receive it one after another, cannot make their *Succeſsive Digeſtions* ſo compleat as they otherwiſe might (for, the latter Digeſtions amend not the errors of the Former) and thereby Crudities or Excrements are ſtill heaped up, to the weakning

even

even of the *Ferments* themselves, so long, till being tired out with labor in vain, they can do no more service to the Bodie; and then by degrees it draws on to death: And thus many times the sicknesses which are felt in remote Parts, the Stomack is primarily in fault of; and the Ferment of it being rectified, the other Ferments also under its command share in the good of its recovery, and make a shift (if not too far evigorated) to recover of themselves. In like manner, on the other hand, if the *subserving Ferments* be at any time faulty, they recoyl upon the Stomack: Thus, if in the *second Digestion*, the *Duodenum* fail in his Duty, through want of the *Felleous liquor* to assist it, or through any other Cause, many times it regurgitates, and putting the *Pylorus* into a Fury, it crucifies the Stomack, causing Nauseousnes, Eructations, Pains, Vomitings, *&c.* The like may be said from the other, till you come to the Heart, where the observation of its Ferment, when debilitated, evidenceth its power of reflection upon the Stomack; for, be it debilitated or disordered, either by excess of Joy, or Fear, or Sorrow, or Venery, or any thing that causeth a dulling, or dissipation of its Native Ferment,

you

you ſee it enjoys not it ſelf, but loſeth its Appetite. Nor do they hurt the Stomack onely, but prejudice likewiſe one another, there being a marvelous Conſent betwixt them All, as there is betwixt the Wheels of a Watch or a Clock, becauſe they ſet one another a going, and if any one be out of order, the reſt are at a ſtand, and rather hinder than advance the Motion of their fellows. Theſe are they, which abounding with an exalted *Salt*, *Sulphur*, and *Spirit*, are exceeding active, and continually buſied in *Fermental Action*, for carrying on the Works of Sanguification, Nutrition, and Vegetation, for a conſervation of the *Archeus* in its Vital Function in every Part and Particle: And thus thoſe Noble Operations, which *Ariſtotle*, *Galen*, *Avicen*, and their Followers attribute to *Heats* implanted in the ſeveral Parts and Veſſels, are the effects of theſe Spirituous active ſubſtances called *Ferments*, which never ceaſe from their activity, but beſtow their Energie upon the Alimentary Juice, as it paſſeth through all the Shops or Offices of Digeſtion, by making it of a Volatile Nature, fit for the eliciting and generation of Spirits, and of that generous Liquor with which the Nervous and Muſcu-

lous parts are irrigated and enlivened: To this agrees that of a learned and ingenious Author of our own, in his Anonymous Treatise lately published *De Ratione Motus Musculorum*; who in his sixth page, treating of those *Spirituous Liquors*, with which every part and particle of the Body doth abound, saith they are elaborated out of the *Alimentary Juice* as it passeth through the several Offices, and so become endued with various and distinct Natures, *pro varia cujusque partis Temperie, ac Fermenti in ipsâ peculiaris ratione*, that is to say, *according to the various Temper of every Part, and the nature of the Ferment which is peculiar thereto.* From whence it necessarily follows, that if any of the *Ferments* be out of Order, the Body grows Spiritless, dull, tiresome, or unapt for Motion; Or if they be defunct, that they cannot at all perform the Duty of their respective Digestions, then all runs to ruine by an ill Habit or Consumptive Atrophy, because the nature of the *Archeus* and of those Ferments which attend it, in the solid parts, is such, that if the Alimentary Juice hath not been elaborated as it ought to be in every shop, as it passeth from one to another, it comes to the last Digestion so imperfect, that instead

ſtead of being aſſimilated to the Solid Parts, Nature rejects it as uſeleſs, and ſo it turns to vitious Excrement; whereupon the *Ferments* implanted alſo in the ſolid parts, wanting fit Matter to work upon for a good purpoſe, and not knowing how to be idle, begin to take ill Courſes, and by reaſon of their reſtleſs activity, do prey upon the ſeveral Parts wherein they dwell, and ſo by degrees conſume the whole Body to a *Sceleton*; which too often falls out now adays, becauſe of the Univerſality of *Scorbutick* and *Venereous* Ferments among the Sons of men, than which nothing is to be imagined more deſtructive of the Native Ferments and Digeſtions of the Bodie.

In ſuch Caſes as theſe, when the reſpective *Ferments* are languid, and cannot digeſt the Alimentary Juice as they ought, the more Nutritive the Food is which men eat, the more miſchief they run into, becauſe it affords more Nouriſhable Matter than the *Ferments* are able to impregnate or make Volatile, to be aſſimilated unto the Solid Parts; and ſo the more men lade the Body with the beſt meats, the more of Excrementious matters are ſtored up in every Part, and ſo much the more perniciouſ,

ous, because *the Corruption of the best is the worst*; by which means nature is rather oppressed, or suffocated, than comforted. Hence it is, that so many persons, in *Consumptions* especially, are even killed by the Kindness (or rather Folly) of their Physicians and Friends, who never think they do well, longer than they are prescribing and giving them high Nourishing Distillations, Broths, Jellys, and I know not what Messes, besides the Pectoral Syrups, Electuaries, and the like, which advance the Disease, and Patients toward a final Destruction, under pretence of Restauratives; whereas they ought in that and many other Diseases, to lay aside these things, and their Notion of Cure grounded upon Contrarieties, that Inanition indicates Repletion, an Emaciated body a rich Feeding; and to mind rather in the first place a reviving of decayed Ferments and Digestions; which being effected by proper Remedies, and by subtracting so much Aliment, as would otherwise clog them, and cloy the Shops of Digestion, then Feeding falls in properly, forasmuch as Nature having recovered her Fermental Force, knows how to make use of the Alimentary juice again, and improve it; which she

will

will do of courſe, if ſhe be prudently (*i. e.* gradually) ſupplied, and will immediately repair the loſſe of Fleſh, and of the rorid Succulencies, in the Bodie. Thus much of *Ferments* in general: For, to treat of them in particular, with their ſeveral Seats, and the mutual Dependencies and Conſents which they have with each other, and what Doctrins may thence ariſe, for Direction in the practiſe of Phyſick, is a Deſign too copious for this Time and place: only, let me obſerve, what Mr. *Boyle* ſaith, * *That he who throughly underſtands the nature of Ferments and Fermentations, ſhall probably be much better able than he that ignores them, to give a fair Account of divers* Phænomena *of ſeveral Diſeaſes (as well Fevers, as others) which will perhaps never be throughly underſtood, without an Inſight in the Doctrin about Ferments.* The truth is, ſcarce any Diſeaſe is to be underſtood without it; and therefore the Doctrin of the Schools having been unacquainted with it, muſt needs be inſufficient alſo in reſpect of this; and their Remedies uſeleſs, becauſe they reach not beyond *Humors* and *Qualities*, and are not able to penetrate ſo deep, as to relieve Nature in ſuch profound and myſterious Deficiencies, as we here ſpeak of: Nor

* *Experim. phyſ. of. part. 1. p. 44.*

did any of the old Authors, in their Discourses about the Method of Curing, aim at any thing like it.

Of Diseases in general. 4. I might assert also that Doctrin never Dream'd of by the Schools in former daies, touching the *Notion of Diseases in general*; for, they make a Disease to be no more but a mere Distemper in *excess of Quality*; whereas *Helmont*, and *Grembi*, make it appear to be a *real substantial thing*, inherent in that which they call the *Archeus* or *Vital Spirit*, where it first hath its beginning, and by this means the first beginnings of Diseases are undiscernible, because they are actuated in and from so fine and subtile a Principle as that which we call *Spirit*; and that is the reason why Physicians so seldom Cure any Disease, which Nature with a little time cures not of her self, because they look not to the Spirituous original, be it either Hereditary, or Adventitious, but ground their Indications of Cure upon the mere Products and Effects of the Disease, rather than the Disease it self, or at the highest only upon *Occasional Causes*, which have no affinity to the essence of a Disease. Upon this Account, I have seen them Purge a Patient, and Bleed him (I know not how many times)

times) over and over, ſuppoſing forſooth, that by this means they drain away much of the inward Cauſe, which ſuch Remedies can never reach in its intimate receſs; and ſuppoſe they could, yet they would rather exaſperate than pacifie the *Archeus* or Vital Spirit, wherein all Chronick Diſeaſes are radically ſeated. And truly, in this matter, *Hippocrates* was wiſer than his Succeſſors, in aiming at the eſſence of Diſeaſes, while he aſcribes ſo much to that which he calls *Spiritus Impetum Faciens*, or the *Active forcible Spirit*, as including the eſſentials of a Diſeaſe; for, in that Vital Spirit (which we call the *Archeus*) implanted in any part of the Body, lurk the difficulteſort of Diſeaſes; and till that Spirit be pacified, or rectified, by a proper Remedy, or by ſome extraordinary benignity of Nature, it is, in ſuch Caſes impoſſible to attain a recovery; —And the truth is, a Cure of this kind is not to be effected by any Remedy, which is not invented and wrought by Rules, out of the beſt and moſt powerful Materials, which are wont to be made uſe of for producing the Nobleſt *Arcana*; that is to ſay, Medicins of as comprehenſive and univerſal a Nature, as may

by the help of humane Art and Industry be devised.

And yet tis not to be denied, that there are many Diseases happen to be difficult and dangerous, which having been at first irritated by Occasional Causes, are removed upon altering or removing those Causes, by which the irritation or offence was first given to the Vital Spirit. Thus those things which *Hippocrates* calls *Acre*, *Amarum*, *Ponticum*, *Acidum*, *Salsum*, i. e. *Acrimonius*, *Bitter*, *Austere*, *Acid*, or *Saltish*, becoming the Occasional Causes of Diseases, it is the Physicians part to inquire into these, and to provide suitable remedies; which though they be not of the Upper Form of *Arcanacs* to reach the *Archeus*, yet may allay his fury at a distance, when these Occasions of offence are taken out of the way. And certainly, such considerations touching Diseases in general, are in order to the Invention of Medicins, more necessary to be entertained in this Age, wherein most mysterious Maladies are naturalised within our Vitals, than the poor Notions so much doted on, which lead not men beyond the thought of *Qualities*, *Temperaments*, and *Humors*:

Humors: for, these serve only against such distempers as are apt to wear off of themselves: And thus (as *Grembs* saith) * *Diseases sometimes are cured by Accident* (that is, as we in English say, more by good hap than cunning) *if they be inclinable to be consumed and resolved of their own Accord; but those which have fixed roots doe elude and scorn* Galenick Remedies, *whereupon through want of Remedy they become incurable Diseases; for, a Remedy ought to respect that Instrument of the Soul called the* Archeus, *or* vital Spirit, which * *Helmont* saith nothing can doe but the more Mysterious Medicins, which are of such a comprehensive Latitude as is little less than *Universal*: Or which may be so deemed, at least in a Comparative Sense, by comparing them with the dull *Recipes* of an inferiour vertue.

* *Lib* 2. *ca.* 1. *De Morbis in genere.*

* *Ortus Imag. Morbos.* p. 44.

5. I may spend time also in explaining the Qualifications and Effects of that *Vital Spirit* called the *Archeus*, and prove, that there is such a thing diffused through every Part and Particle of the Body, as director general of all the works of Generation, yea and Corruption also; the great Exciter of all Motions, being (as one describes it) a Thing very delicate to be

Of the Archeus.

* Grembs de Ortu Rerum, l. 1. cap. 7.

be conceived, but is * *Medium quid inter Vitam & Corpus, & veluti Aura Nitens ſplendenſq;* a kind of Middle thing betwixt Spirituous and Corporeous, as it were a *Luminous Air*: But for the more accurate deſcription thereof, I refer you to *Helmont* himſelf. Yet becauſe 'tis the Reformation of the *Galeniſts* which I aim at, I ſhall not omit to ſhew, it was a thing apprehended by one of their own Authors, and indeed the wiſeſt of their number, I mean the quaint *Fernelius*. * He begins thus, *The proper ſignification of* Spirit *is* Wind, *in all Languages; and whereas Wind is very powerful, and effecteth wonderfull things, and is not to be ſeen by our eyes, it hath ſo fallen out through a kind of affinity and ſimilitude, that the name of* Spirit *is transferr'd unto every thing which falls not under our ſight, whether it be corporeal, or Incorporeal. Hence it is, that the ſubſtance which is in Us, very like to ſubtile Air, undergoes the Appellation of* Spirit. *But it is ſomewhat of a nature differing from Body and Humors, which* Hippocrates *called* τὸ ἐνεργὸν, *or* Incitans, *ſomewhat of an impetuous force, not from the tenuity of its ſubſtance, but becauſe it hath a great power of excurſion, like* Wind. *So far therefore as it excites*

* De Abdit. rer. Cauſ. l. 2. cap. 7.

excites thoſe impetuous Motions, it is underſtood to have ſome affinity with the Nature of a Body; but in aſmuch as it cannot be ſeen, it draws near to an Incorporeal Subſtance; whereby it comes to paſs, that it is of a middle nature betwixt them, and partakes of both. This Spirit *is the Vehicle and proper ſeat of the Soul and all its faculties, which perhaps you may properly call their Body: for ſo the Platoniſts of old ſaid, that a certain Body of an excellent nature, Perlucid and Ethereal, is ſubſerving to the Soul and its faculties, to the end that they may be United with the Earthy and groſs Body.* Yea, and as if he meant to paint our *Archeus* to the Life, he a little beneath ſaith, *Nature which is in that Spirit, hath obtained a condition more excellent and more divine than that of Spirit.* And preſently after he adds, *it muſt needs be a Thing different from the Temperament of the body, and be conſtituted above the nature of a Temperament, ſeeing it is the Author of life and all the Functions. The heat which is in this Spirit is not of the common ſort,* (he ſaith) *but plainly Divine and Heavenly, like the light or heat of the Sun.* By this you ſee, his deſcription of the *Archeus* or Vital Spirit, exactly agrees with that which

is

is ſet down by *Helmont* and his followers.

Add to this alſo the ſence of *Heurnius* in the beginning of his * *Inſtitutions*, whom (of all the Galeniſts) I reckon the man that ſaw moſt, next to *Fernelius*, who defineth this Spirit to be *a kind of Ethereal Body, elaborated out of the pureſt part of the blood, and changed into the Subſtance of a very ſubtile Air, and it is the prime Inſtrument of the Soul, for performance of all its Functions.* To which I may add alſo, that it is the Creator of the greateſt diſtempers: for, the ſame * Author ſaith, that before *Galen*, that which we now call the *Cauſa Continens* of a Diſeaſe was aſcribed to this *Spirit* by *Herophilus* and his followers; becauſe when this Spirit in any part is extravagant, then a Diſeaſe ariſes, but when it returns to good order, then the Diſeaſe is at an end. And the ſame Author, *cap.* 5. cites the Authority of *Plato* in *Charmide*, *Ubi eleganter demonſtrat omnes morbos ex animo naſci, where he elegantly demonſtrates, that all Diſeaſes have their original in this* Animus, this Wind, this ſubtile Ethereal Air, this *Impetum Faciens* of *Hippocrates*, this *Spirit*, or call it what you pleaſe; it matters not what

* *Lib.* 3. *cap.* 1.

* Lib 7 cap. 7. *Enunq. Spiritum Cauſam Continentem dixere.*

what the Name be, if we agree about the Thing; Either the occaſional irritation, or the ſpontaneous exorbitancy of this, which we call the *Archeus*, is the prime Cauſe of every diſtemper. And in his ſixth Book, *cap.* 1. he ſaith, that *Argenterius*, a learned writer of the ſame Tribe, endeavours his utmoſt to prove, *that a Diſeaſe firſt hurts the Faculty, afterwards the Action or Function.* Now conſider, that the Faculty is one and the ſame with the *Archeus* or Vital Spirit, and to be ſeparated by the conception of the mind only; *Facultatem nihil aliud eſſe intelligimus, quàm ſubſtantiam partium animatarum, By a Faculty* (ſaith he) *we underſtand nothing elſe but the ſubſtance of the parts which are animated*; that is, in truth (ſay I) the *Archeus* or Vital Spirit implanted in every part, which *Fernelius* before calls a very ſubtile Aerous Subſtance, endued with faculty to put in execution this or that Function for the ſervice of the Body; but when it is infeſted, or enraged, then to raiſe Tumults, Diſcraſies, and Diſorders, to the detriment of the Body: which exactly ſuits with the Notion of *Helmont*: And the uſe of it is very great; *viz.* in all our Scopes about Curation

of

of Diſeaſes, eſpecially difficult ones, that we ſhould raiſe our thoughts above the common Notions of *Qualities*, *Temperaments*, *Humors*, and the like, and bend our Brains to a courſe of Medicaments that are of a reach beyond thoſe low conceits, and which will extend their power to a rectification, and pacification of the *Archeus*, in any of the Parts affected. * *Vix tu ſanè poſſis numerando percenſere functionum genera quæ ſupra elementorum vires ſunt, & quæ nequaquam ad illorum temperaturam pertinent.* *It is* (ſaith *Fernelius*) *a hard matter to number up the ſorts of Functions* (or Operations) *which are beyond the powers of Elements, and which doe in no wiſe belong unto their Temperaments.*

* Fernel. de *Abd. rer. Cauſ. lib* 2. *Cap.* 8.

The conſequence whereof therefore muſt be this, that we ought to look after Cauſes more high, concealed hitherto from vulgar underſtandings, which the lazy Doctors of the Schools heretofore never inquired into, but with eaſe referred all that was beyond the common Doctrinals, to that grand Refuge of Ignorance termed *Occult Qualities*, *Proprieties*, and *Occult Diſeaſes*, for which no reaſon (as they ſaid) was to be given, becauſe they had none to give of their own, nor could find

find any in their out-worn Authors, and therefore thought they had no reaſon to beat their Brains about the Buſineſs, as long as they could do their own buſineſs without it. But enough of this, ſeeing it hath pleaſed God ſo to illuminate this Age, by the Induſtry of ſome few, after whoſe example ſome others are perpetually engaging themſelves in diſcovery of things, as to their Eſſences and Cauſes, which heretofore had been lockt up and kept *occult*, in the dark Chaos of Pride, Ignorance, and Idleneſs; yet with a pretence of Learning.

6. I might inſiſt alſo upon the Doctrin of *Ideaes*, how far they contribute toward the Cauſation of Diſeaſes, by their Influence upon the *Archeus*; as alſo how Diſeaſes are cauſable and curable by the force of *Imagination*; and what effects are produceable by *Sympathy* and *Antipathy*; and make reflections likewiſe upon the whole Doctrin of *Magnetiſm*; all which carry us above the uſual groſs Speculations belonging to our Profeſſion; but leſt I ſhould in ſuch diſcourſes appear too *Platonick*, or Fanatick, in the opinion of ſuch as conſider not, *that all the Effects and Operations in this viſible world have a dependence*

dence upon the invisible, I forbear an Inlargement upon these particulars; though I must tell them, they are of excellent use, and without any Superstition, in the curing of Maladies, and doe only conduct us out of the common Road into the Inner Closets of Philosophy and Physick: For, that Diseases are caused, and may be cured as well as caught, *per radios invisibiles*, by invisible radiations or Influences, or by intermediation of *Corpuscles*, *Atoms*, *Effluviums*, or flying particles, after an undiscernable manner, is a matter now so far out of question, that he who will deny it must first renounce his own knowledge of visible effects, and run cross to the Observations of the wiser part of the world, and against the more Sublime Conceptions of this Inquisitive Age.

The last Thing that I might insist upon in order to the practise of Physick, is that which I had first in my Intention when I fell upon the penning of this Book; and tis this Position, That there is in this Age somewhat of a *venemous dispostion*, or Malignancy (more or less) in all manner of Diseases, not known to former Ages, which touching the work in general of Curing, is of a consideration paramount

to

to the old Notions, about which there hath been ſo great a ſcuffle in the Schools: So that there was never ſo much cauſe as now, for men to conſider *Hippocrates* his τὸ θεῖον, which * *Fernelius* tranſlates not *quid Divinum* as properly ſo, but *quid Admirabile*, ſomwhat that is admirable or extraordinary in Diſeaſes, as *proceeding from a more hidden Cauſe, whith is* (ſaith he) *above the condition of Elements; and works not upon the Temperament, but upon the whole Habit of the Body.* But what this Extraordinary thing is, I forbear to repeat in this place, becauſe it is ſufficiently deſcribed in ſeveral of the foregoing Chapters, which diſcourſe of the Marvelous Change that is wrought in all manner of Diſeaſes, by the intervention of *Verminous, Venereous*, and *Scorbutick* Ferments.

* *De Abd. rer. Cauſ. lib 2. cap. 10.*

CHAP. IX.

An Examination of divers old Doctrins which more immediately relate to the Practiſe of Phyſick.

HAving with good Authority examined, and upon good ground rejected the old Scholaſtick Principles of Phyſick, and ſubſtituted better in their places, as much more conducible to the Art of Curing, tis now time to proceed to an examination of the other Particulars, which more immediately concern the Methods and Practiſes of thoſe that would be reputed the only *Methodical Phyſicians*; and here we ſhall have occaſion to throw out divers other Doctrinals which have been hitherto received, and Abuſes which have crept into the Profeſſion.

I. Let us caſhiere the Hypercritical Doctrin about *Critical Daies*; as childiſh a Conceit as ever was owned by any Long Beards called the Children of men; for, truly it is like the Children's game called

Ludere

Ludere Par Impar, *Even and odd*, and yet the Antients all are very grave at it, reckoning much upon *even daies and odd daies*, except only *Celſus*, of whoſe opinion you ſhall have an Account by and by. In the mean while know, that a *Criſis* * is a *changing of the Diſeaſe to a contrary ſtate*, that is to ſay, either to better or worſe, *to life or to death*; and the daies to which ſuch Mutations are aſcribed are called *Critical daies*. The eſtabliſhment of them was by *Hippocrates* in his *Aphoriſms* and *Prognoſticks*; and from him, *Galen*, and all the reſt of the Commentators have borrowed the Phantſie. They are ſuppoſed to be of moſt uſe in the Curing of *Fevers*, and other Acute Diſeaſes; yet ſome are ſo vain as to extend them to the *Hundredth*, and the *Two hundredth* day, when Diſeaſes from *Acute* become *Chronical*; yea and they would yet ſpin out the Patience and Purſe of a Patient further than this, in expectation of a Critical ſolution of a Diſeaſe by the benefit of Nature; which Doctrin being admitted, ſerves for two purpoſes very well; Firſt, to cloak the Ignorance and Inſufficiency of ſuch, who ſticking to old Rules of practiſe, have Authority to hold Patients ſo many daies in hand without re-

* *Horatius in Hippoc. Progn. l. 3.*

leef, and yet be reputed never the worſe Phyſicians; Secondly to hide the Inſufficiency of the old Art it ſelf, and of thoſe Medicins that belong to it, that Patients may be trained on to take more, and lay the blame of all upon a ſuppoſed rebellion of the Diſeaſe, rather than an impotence of the Courſe of Remedies; which if it cure not, yet muſt it be thought neceſſary to be continued, in expectation of the day of Judgment, otherwiſe called a *Judicatory day of Criſis:* In the mean time, the Apothecaries and the Nurſes are bound to ſay *Amen* to the Buſineſs, and impute the delay to the great Caution and Care of the Phyſician, who is ſaid to watch Natures Motions, but oftentimes lies gaping for the Motion of Nature ſo long, till for want of being rouſed by ſome noble Remedy, ſhe fall aſleep for ever.

But to go on; let me give you the ſum of *Hippocrates* in his Prognoſticks about this matter: There are in Acute and Feveriſh Diſeaſes, which are reckoned by daies, ſome daies called *Decretory* or *Critical*, in which Nature of her own accord, without help of Medicin, doth upon an *odd day* make excretion of ſuch noxious Humors as are ſeparated by Digeſtion: Other daies

daies there are, called *Indiciarie* or Significative, which are ſuppoſed to ſignifie, by ſome precedent ſign, the coming of the *Criſis* upon a *Septenary*; as for example, they ſay the Fourth day ſignifies what will fall out on the Seventh, and ſo you are to reckon by Fours and Septenaries, till you arive (if there be occaſion) at an Hundred. Thus, *Hippocrates* dividing the week into two Parts, hath digeſted it into *Quaternaries* or *Fours*, which in making the Account are alwaies Significative of the Septenaries. In ſhort, ſome daies are reckoned by an *odd number*, others by an *even number*. In his fourth *Book De Morbis*, he ſaith, *tis deadly* to adminiſter a Purgative upon an *odd day* (which by many Inſtances and Obſervations I know to be moſt falſe, and that in all probability Patients muſt have either Died, or been the more difficultly Cured, had they not been purged, or vomited upon ſuch a day;) but upon *even daies* he gives leave of Purgation; yet confeſſeth, that the Phyſicians before him did not think fit to obſerve theſe things: but concerning this, ſee more in * *Joannes Langius* his Epiſtles.

* Epiſt. Med. l. 2. cap. 60.

The Commentator upon *Celſus*, a Hot man for *Hippocrates*, having reckoned up

theſe for *Critical dayes* in Acute Diſeaſes, *viz.* 4. 7. 11. 14. 17. 20. 24. and 27. ſtops not here, but goes on to 31. 34 37. and 40. But let them reckon as they liſt, tis a ſhame to think, that the world in two thouſand years time ſhould be no better improved, in ſome men's opinion, than to admit of ſuch Conceits as theſe; that they can keep a Patient in an ordinary Fever twenty one daies without releef, till Nature her ſelf, by her own ſtrength, or her great Enemy Death, come to give a releaſe; and yet it ſhall be thought a wiſe peece of Art ſo to carry the matter, and the Phyſicians learned enough, though they be not Maſters of ſo much as one noble Remedie, to give a Turn to the Diſeaſe, but the Patient ſhall be learnedly left to languiſh, and nothing be done, for fear forſooth of anticipating, or impeding a *Criſis*; whereas if a right courſe were taken with proper potent Remedies, the neck of a Fever might be broken long before it be ſpun out to the 21. or the 40. day, yea the ſting of the Diſeaſe might be taken out in the very beginning. I muſt confeſs, that what * *Grembs* ſaith of *Helmont* is very much; *that he undertook, without Blooding, and with allowing the Patient Wine, to remove a Fever*

* Lib. 2 ex. 3. de Febr. num. 4.

Fever in Four days time, by the help of Diaphoretick Preparations; and that he thought any man unworthy the name of a Physician that cannot do the like. As for Blouding, I have seen enough of the wickedness of that practise in Fevers, and the Folly of fearing to relieve the Patient with a little Wine now and then, to support the Spirits; but it is not for any man to be positive in the number of *Four daies*, who is not Master of such noble Medicaments as *Helmont* was, that can incide, attenuate, resolve, and take away the Occasional Cause in what places soever it may lurk; yet I know, that by the time that the Fever arives at the first pretended Critical day, which in common computation is the seventh, there are Medicins to be had, with which the height and Fury of that dreadful Disease shall be either taken off, or else a Judgement shall be pronounced what the Event of the Disease is like to be.

Which being considered, it cannot but Nauseate any ingenious man, to read the Superstitious Fooleries of Authors, and to see how they puzzle one another with petty quarrels about the Doctrinal part of this

ſort of Criticiſms; and tis like to be good, when they cannot agree about the Cauſes of them, or any thing elſe that concerns them; and truly, the Conſequent of it is miſerable, becauſe that one ſingle pretence of waiting for Critical ſolutions of Acute Diſeaſes, hath in all times, been an occaſion of ſlaying at leaſt two parts of that part of mankind that hath died of Fevers; for 'its a Fundamental principle with ſome, that you are to deal with ſuch a Patient only with Languid remedies (chips in pottage) and leave Nature to ſhift of her own Accord to cure him, if ſhe can: And yet theſe are called *Safe Doctors*, though they do juſt nothing, and can hardly make a ſtep beyond *Gaſcoins Pouder*, *Magiſterie of Perle*, *Bezoar* (which is generally counterfeit) Treacle-water, the cool Water of *Sax*: a few Syrups, and one or two more Shop-Magiſtrals, with a Clyſter; which the Boys can tell the road of Adminiſtring, as well as themſelves; and therfore tis but reaſon that the Maſter Apothecaries undertake to practiſe without us, and (to ſave the Patients Purſe) ſeldom ſend for us till needs muſt, and even then alſo the Apothecary might proceed as well alone; for, he knows the *Summa Totalis* at the Tail of all

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(as well as vulgar Mr. Doctor) to be but *Bliſtring*, *Cupping*, and *Pigeons*, and the like Cordials as before; and ſo there's an end of the ſtory; but it concerns him to palliate all that hath been done, by late ſending for a Doctor, who when he comes, doth juſt no more; and what more can be done for the poor Patient after this, but to leave him to his own good Nature, and Gods bleſſing, by ſome happy *Criſis* to reſcue him from the power of the Grave? whereas all this hazard might have been prevented at firſt, by other kind of Medicins and Methods: with which, ere long, a Courſe will be taken to furniſh the Nation.

Of critical days.

In the mean while, it will be very neceſſary, for the information of our Countrimen, to deſcend a little to a view of the odd Conceits of the great *even and odd gamſters* about *Critical daies*. *Hippocrates* himſelf was wiſer than his Followers, in this one thing, that he would not venture to aſſign the Cauſes of ſuch daies; onely he gives notice, that he in his own experience had obſerved them to fall out ſo, and thereupon concluded there was an *innate propriety* in theſe daies to produce ſuch effects more than other daies. And *Avi-*

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cen ſaith, he did well in this buſineſs, to content himſelf only with Experience; but it is as lawful to object Exprieence againſt it, that in our Age all things fall out as well upon the other daies, as upon thoſe that he calls Critical. Nevertheleſs, let us ſee his ground for his opinion: its no other than this, that he ſuppoſeth a kind of Charm in the Number Seven, and in a Computation by *Septenaries*, ſaying, that a * *Septenary is as it were the Law of Nature, after the example whereof all things are diſpenſed*; which ſuits juſt as well with the Law of Nature, as the Conceit of another Naturaliſt doth with his, *viz. Ariſtotle*, who trips up *Hippocrates* his opinion with a *Trez* or *Trey* (as we pronounce it) ſaying, * that a *Ternary is as it were the Law of Nature, whereby all natural things are diſpoſed.* Nevertheleſs, *Hippocrates* carries it with his Succeſſors, who in the afore-cited Book ſaith, *man's life is diſpenſed by ſevens.* But it is to be obſerved, that whereas in his Epiſtle to his Son *Theſſalus*, he gives no reaſon for this but the *neceſſity of Nature*; ſo in his Book *de Ævo*, having promiſed, that he would in time give other Reaſon by particular explanation, he wholly neglected the performance, and tamely reſolves

* *Hippocr. lib. de Carnibus.*

* *Ariſtot. lib. 1. de cælo cap. 1.*

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the whole evidence of the matter into his own observation and experience.

Now though the grand Leader was so shie and timorous to venture upon giving a Reason, yet the Followers have been more hardy: some have assigned one Cause, some another, and so 'tis like to come to somewhat, when the prime Dictators can agree upon Nothing. The Followers of *Pythagoras* referred the Cause of *Critical daies* to the mysterious power of the Number *seven*, which odd number (they say) is more potent than an even number: For (they tell us) *although number be not a substance, yet it hath a substantial effect upon things from a cause unknown to us*: that is, *ignotum per ignotius decernere*, to determine an unknown thing by a thing more unknown; which Doctrin of theirs, touching number, is repeated by *Galen* *, and by him well enough refuted.

* 3. *de diebus Decretoriis cap.* 8. & 11.

But he lapseth afterward himself as fondly as the *Pythagoreans*, and falls in with the Astrologers, ascribing the *Critical daies* to the Motion of the Stars, especially of the Moon, as their principal Cause. To which I say no more but this in short; If it were so, then the Squares and Weeks of the Moon would always concurr with the

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Quaternious and Weeks of the Diſeaſe; but this very rarely falls out. Moreover *Fracaſtorius*, in a particular Treatiſe which he ſet forth upon this Subject, ſaith, If the Moon hath any Power, it muſt be by reaſon of her celeſtial Light and Heat; but her Light doth not ſend forth Heat on one day more than another, but only as it is more or leſs reflected upon the earth; which happens in the Sun, when he is nearer, or his beams more direct; in the Moon, when ſhe receives more Light from the Sun, which falls out when ſhe is more remore from the Sun. If this be true, it follows then, that ſeeing ſhe is on the eighth day more remote than on the ſeventh, and conſequently hath more Light and Heat, we ought to conceive the Eighth day more likely to be Critical than the Seventh.

And yet *Fracaſtorius*, who in this argueth ſufficiently again *Galen*, committs as groſs an Error himſelf, while he aſſigneth the Cauſes of Critical daies to *the Motion of the Melancholick Humor*, which (according to the old Phantſie) is ſuppoſed to have its Motion every Fourth day by a peculiar propriety. Upon this, as the Antients vainly grounded the Circuits of Quar-

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tan Agues; ſo he ſuppoſed it might ſerve his Turn to eſtabliſh a reaſon thereupon, why the Fourth day is ſaid to be *Critical*. But ſuppoſe (as we have before proved) that there is no ſuch Humor in the Body of man as that which is termed *Melancholy*; what then becomes of his Conceit about the Motion of it? And admit there were ſuch a Humor, it would be hard to prove the Motion, none of the old *Grecian* Writers having ventured to give any account for it but their own Word and Authority. Therefore he might have done better to aſſign no new Cauſe at all, when he contradicted *Galen*, but to have been ſilent, and to have labored rather to excuſe *Galen*, as * *Zacutus* (the great *Galenick* Jew) hath endevoured; for, to ſave the credit of *Galen* for falling in with the Aſtrologers about this matter, he ſaith there are ſo many things in that Book wherein *Galen* is ſuppoſed to deliver that opinion, which are vain, falſe, and unworthy the wit of *Galen*, that he cannot but conclude it to be none of his, but altogether Spurious and Illegitimate.

* *Med. Princ. hiſt. lib. 6. q. 13.*

But the moſt ridiculous of all is that of * *Amatus*, and *Cartagena*, *de ſign. dier. Decret. c.* 18. who both of them had recourſe

* *Tract. de Dieb. Decret.*

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to *Musical Notions*, *the Concent, and proportions of numbers*; *and as among those Numbers some are Dissonant, and others Consonant*, so (say they) *it happens in daies of sickness*; therefore the daies Dissonant from the first day, by reason of the cause of *disagreement which they have therewith do stir up Nature to a Contention*; *but the daies Consonant to the First day, by reason of the likeness which they have therewith, are disposed to quiet, and so do not provoke Nature to a Contest, and by consequence do not stirr up a Crisis.* Which is an odd kind of Riddle, to say no more. But this confirms what hath ever been observed, that *one Absurdity begets a Thousand.* That one Phantsie of *Hippocrates* about *Critical daies* hath set all his Followers a madding to give Reasons for them; and so they are all lost in a Fog.

Therefore *Asclepiades* warily considering the matter, said it was a vanity to seek after a Cause of *Critical daies*, supposing them a *mere Figment*; and he derided *Hippocrates*, for making some daies *Indicatory*, other days *Judicatory* or *Critical*: *For, in no day* (saith he) *because it is even or odd, is there any danger more or less.* This Judgment of *Asclepiades* is seconded very much

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to purpose by *Celsus*, whom *Heurnius* and other notable Galenists reckon not inferior to *Hippocrates*. The truth is, he hath taken out of *Hippocrates* whatever is of moment, and digested it in his own Book, but he leaves him to himself in the business of *Critical daies* and expectations. And though * *Zacutus* would fain perswade us, that what *Celsus* declares against *Critical daies*, is not according to his own mind, but that he relates it only as the Sence of *Asclepiades*, yet (by his Favor) tis no such matter; for, *Celsus* is very plain and positive in the Case, as will appear to any Reader, and I shall here translate the place *Verbatim*, * where you shall see he approves *Asclepiades* his Judgement in casting off such daies, and saith *jure repudiavit*, he did well in repudiating them. The words are these: *Hippocrates, if a Fever abated upon any day besides a Critical, was wont to fear a Return or Relapse. But* * Asclepiades *did justly repudiate this as vain, and said, there is in no day, because it is even or odd, any danger, more or less. For, sometimes the odd daies become the worser. Sometimes also in the Disease it self the Course of daies is changed, and that day becomes more grievous which was wont to be the calmer:*

* *Med. Pri. Hist. l. 6. Quæst 11. p. 979.*

* *Celsus, de Re Med. cap. 4.*

* *Asclepiades lived in the time of Pompey the great.*

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Moreover, the Fourteenth day it ſelf is an even day, upon which the Antients did lay ſo great a ſtreſs. Who when they contended that the eighth day hath the ſame Nature with the Firſt day, ſo that the Second Septenary or Number Seven ought to begin from thence, did thereby contradict themſelves, in not reckoning the Eighth, nor the Tenth, nor the Twelfth day, as the more powerful; for, they attributed more to the Ninth, and the Eleventh. Which when they had done without any probable reaſon, they paſſed from the Eleventh, not to the Thirteenth, but to the Fourteenth. We find alſo in Hippocrates, *that the Fourth day is reckoned moſt grievous when the Patient is like to have his Critical Deliverance on the Seventh. So alſo he ſaith, that upon an odd day, the Fever may be both more grievous, and a certain ſign of what is to come. And in another place, he apprehends every Fourth day as moſt efficacious in both reſpects, that is to ſay, the Fourth, the Seventh, the Eleventh, the Fourteenth, and the Seventeenth, whereby he paſſeth from odd to the account of Even. And yet here he holds not firm to himſelf, foraſmuch as the Eleventh day computed from the Seventh, is not the Fourth day but the Fifth. So it appears, that which way ſoever we count upon number,*

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there is nothing of reaſon to be found in that Author. And what (I pray you now) could be utter'd by ſo grave an Author as *Celſus*, with more Tartneſs againſt *Hippocrates* his Phantſies about *Critical daies?* So that I fear *Zacutus* his eyes were not his own when he read this Paſſage; but *Baldwin Ronſſeus* in his Comment, ſaith plainly, that *Celſus* is clearly of one and the ſame opinion with *Aſclepiades*, about this Buſineſs.

I might to theſe add a large Account of the Quarrels among Authors, about the time from whence the computation of daies is to begin, but I wave it: ſometimes a Patient (as we often ſee) becomes Feveriſh for two or three daies, and then it abates for three or four daies more; and a few daies after, the Fever comes on in good earneſt: Now, in ſuch a Caſe, it were well if any could aſſign a right time from whence the Computation ſhould begin. Beſides, admit a right time be pitch'd upon from whence to compute, yet to what purpoſe is it to reckon onward in expectation of a *Criſis*, whenas every ſmall circumſtance will alter the Motion of the Maſſe of Bloud, and the *Pepaſmus* or Concoction of the Morbifick

matter, upon which the *Criſis* is ſuppoſed to depend? ſo that it ſhall not come to paſs on the Set-day according to expectation, and perhaps not at all: For, I have often obſerved, that ſometimes a Purgation, ſometimes want of Sleep, ſometimes a little Broth, ſometimes a little Cold, ſometimes a ſlender Invaſion of Ill News, Grief, or Fear, and divers other Accidents, have wrought a marvelous ſudden alteration in a Patient, ſo that all things being out of order, what orderly *Criſis* (if any ſuch Thing be now in Nature) can in reaſon be expected? The Truth is, there are ſo many probable Rubs in the way to hinder the proceſs of the *Pepaſmus*, that it is a wonder, if in the North-parts of the world, where our bloud is not ſo fine and brisk, nor the Air ſo benign, as in warmer Climates, if ever we ſee in twenty years practiſe ſo much as one complete Critical Solution: For (as Doctor *Willis* well obſerves) if any thing fall out which is not clearly conducing thereto, the *Criſis* (if any be) proves vain and treacherous, ſeldom putting an end to the Diſeaſe. For, admitt that the Moon or other Stars did by their Influence in part regulate the Critical motion (as *Galen* would have it wholy)

* *De Febr. caſ. 9.*

wholy) yet the ſame Doctor well notes, the *critical evacuations are determined only by a turgeſcencie of the aduſt matter*; and that he ſhews may, *pro re natâ*, fall out ſooner or later, ſo that there can be no certain time: And many times, I have obſerved a cruel Diſeaſe ſpend it ſelf, without any the leaſt ſign of a *Criſis*; eſpecially when the Phyſician hath furniſhed his Patient with ſome commanding Remedies; for, theſe either immediatly accelerate ſome Mutation that is like a *Criſis*, or elſe they need not the aſſiſtance of any ſuch violent excretions as uſe to attend a *Criſis*, to put an end to the Diſeaſe; which they are wont to diſſolve after a more eaſie and leſs perceivable manner, little being to be obſerved beſides gentle Sweating. And as touching the uncertainty of Critical daies, *Valleſius* * alſo is very poſitive, and ſaith, if the Moon and the Stars do not govern them, they muſt needs vary, either by a change of the quantity of the Matter, or through an encreaſe or diminution of the Patients ſtrength: *For, if in a Diſeaſe which ought to be determined on the ſeventh day, you draw away, or add but a little matter, you may cauſe the Criſis to fall on the ſixth or eigth*

* Controverſ. Med. & Philoſoph. l. 10. cap. 2.

matter, upon which the *Crisis* is supposed to depend? so that it shall not come to pass on the Set-day according to expectation, and perhaps not at all: For, I have often observed, that sometimes a Purgation, sometimes want of Sleep, sometimes a little Broth, sometimes a little Cold, sometimes a slender Invasion of Ill News, Grief, or Fear, and divers other Accidents, have wrought a marvelous sudden alteration in a Patient, so that all things being out of order, what orderly *Crisis* (if any such Thing be now in Nature) can in reason be expected? The Truth is, there are so many probable Rubs in the way to hinder the process of the *Pepasmus*, that it is a wonder, if in the North-parts of the world, where our bloud is not so fine and brisk, nor the Air so benign, as in warmer Climates, if ever we see in twenty years practise so much as one complete Critical Solution: For (as Doctor *Willis* well observes) if any thing fall out which is not clearly conducing thereto, the *Crisis* (if any be) proves vain and treacherous, seldom putting an end to the Disease. For, admitt that the Moon or other Stars did by their Influence in part regulate the Critical motion (as *Galen* would have it wholy)

* *De Febr. cap. 9.*

wholy) yet the ſame Doctor well notes, the *critical evacuations are determined only by a turgeſcencie of the aduſt matter*; and that he ſhews may, *pro re natâ*, fall out ſooner or later, ſo that there can be no certain time: And many times, I have obſerved a cruel Diſeaſe ſpend it ſelf, without any the leaſt ſign of a *Criſis*; eſpecially when the Phyſician hath furniſhed his Patient with ſome commanding Remedies; for, theſe either immediatly accelerate ſome Mutation that is like a *Criſis*, or elſe they need not the aſſiſtance of any ſuch violent excretions as uſe to attend a *Criſis*, to put an end to the Diſeaſe; which they are wont to diſſolve after a more eaſie and leſs perceivable manner, little being to be obſerved beſides gentle Sweating. And as touching the uncertainty of Critical daies, *Valleſius* * alſo is very poſitive, and ſaith, if the Moon and the Stars do not govern them, they muſt needs vary, either by a change of the quantity of the Matter, or through an encreaſe or diminution of the Patients ſtrength: *For, if in a Diſeaſe which ought to be determined on the ſeventh day, you draw away, or add but a little matter, you may cauſe the Criſis to fall on the ſixth or eighth*

* *Controverſ. Med. & Philoſoph. l.* 10. *c.* 2.

day : Wherefore seeing proportion may be alter'd in each Constitution, or in any Disease, it is impossible to fix the same Critical daies for all Fevers, and Natures, and Countries, and Ages, and Seasons. And if so, then the certainty of such daies, and all the Doctrin about them, falls quite to the ground. To the very same Sence also speaks * *Langius* in his Epistles, where he brings in *Galen* himself, confessing that *Critical daies* are uncertain, because of the various Concerns of the Morbifick matter, through Accidents, *&c.*

* Lib. 1. Epist. 35.

This being so, it is very well done of *Regius* present Professor at *Utrecht*, to free our Profession from such a parcel of perplexing Notions to no purpose, as were left us in old Authors, touching this Critical Doctrin; For in the new Foundations of Physick by him laid, he takes but slight notice of it, and presently concludes in these words : *In these Countries Crises do seldom fall out, both because of the Coldness of our Air, and because our Physicians being furnished with more benign Purgers, do happily drain away the matter of the Disease* per Epicrasin, i. e. *by gradual gentle Purgation, and so they carry off the Cause of the Crisis.*

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But of all others, I find *Helmont* most positive and powerful in the discussing of this Point, in his Treatise *De Tempore*, where, after some other Discourse about it, he adds this: *I have always observed* (saith he) *with diligence, that there is never any Crisis at all, where the Physician being Master of his Art, knows how to take away the Disease before the usual time of the Crisis is come: For, as nature enjoyeth ordinary Motions, and is accustomed to them, and is readily governed by the unity of the Motive Faculty, so when the whole Business of a Disease rests only upon her shoulders, she endeavors at some times to stir up a Crisis, which otherwise the goodness, or the badness of a Medicin or manner of curing doth anticipate, retard, or destroy. By this means forsooth sometimes the Crisis that was expected on the Fourteenth day is prolonged till the Fortieth. It is the part therefore of a good and faithfull Physician, not to give any regard to Crises; and it were better for the Patient to have been without a Physician, if he be cured by a Crisis; and so much the more, if his Crisis were slower. But to what purpose is so great a Catalogue of Critical dates? seeing it behoves a Physician to be so armed, as to be able to tame a dangerous Disease, and shorten a long one;*

that is, extirpate it betimes, that it may not be delayed in expectation of a Crisis. And the same Author, in his book concerning
* Cap. 11. *Fevers* *, adds more to the same purpose: *A good Physician ought not to regard Crises, but rather to prevent them. For, Nature never intends a Crisis, unless it be when she is left to shift for her self, and to bear the whole burthen alone. Therefore a true Physician ought to overcome the Disease before the usuall Time of Crisis, and so he neither expects, nor desires it.* The Consequence then is, that it must needs be very pernicious to hold up the pretence of *Critical daies* in the Profession of Physick, because the Physician is thereby inabled to justifie himself, although he do leave Nature to her self to struggle with the Disease, while he lazily looks on, and with his formal visits only keeps Count of daies, and orders the common feeble Medicins, which have little power to effect any thing considerable towards a speedy extirpation of the Disease; so that of course the Patient ought to lie languishing, till time, rather than the Physician, brings on a delivery. But of this I have said enough before, as the great occasion of ruin in *Acute Diseases*; and a Cloak to the Ignorance of old

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Pedantick Practiſers; beſides that it ſtrangulates all thoughts of deviſing more potent Medicins, or of introducing other Methods more agreeable to them, and much more rational, than thoſe which depend upon the Superſtitious Fictions of old heatheniſh Authors.

II. The next thing to be conſidered is the Doctrin of *Pulſes*; which ought in part to be caſhiered alſo, and in part to be retained. I remember, when I firſt ſtudied Phyſick, I ſpent much time to underſtand the tedious Deſcriptions and Schemes or Tables of different Pulſes enumerated by *Galen*; but they ſerving for no end but vexation of the Brain, oſtentation of pretended Science, and to impoſe upon the world, it is meet to reduce the uſeful part to a narrow Compaſs, that Students may not be confounded about it in the future. The Firſt that attempted this (if I miſtake not, for I have not the Book at hand) was the grave *Spaniard Percda.* Since him,* *Horſtius*, as grave an Author as he, hath done the like, and he brings in alſo one reputed the graveſt of them All, *viz. Petrus Aponenſis* the *Conciliator*, who ſhews how endleſs a matter it is to ſpin out ſo many Notions as *Galen* hath done

Of Pulſes.

* *Greg. Horſt. Inſt. Med. Diſput. 13. Quæſt 1. Conciliator Diff. 82.*

done about Pulſes; for, (ſaith he) after the ſame rate of *Magis* and *Minùs*, they may be infinite; therefore he reduceth them to *Ten* in number; and that this is ſufficient, they both of them demonſtrate thus: In every motion are to be conſidered, 1. The *Space* by which the Motion is made, 2. The *Time* which is conſumed in the paſſage of the Space, 3. The *Quiet* or *Pauſe* which followeth both the Motions, 4. The *Efficient Cauſe* of the Pulſe, 5. The Inſtrument whereby it is effected. From whence ariſe *Ten ſimple Pulſes*.

1. In reſpect of *Space*, or diſtenſion and contraction in the Space, a Pulſe is *great*, or *little*.

2. In reſpect of *Time*, to which the quality doth anſwer, it is *Swift*, or *Slow*.

3. In reſpect of the *Quiet* or *Pauſe*, it is *Frequent*, or *Rare*.

4. In reſpect of the Mover or *Cauſe Efficient*, it is *Weak*, or *Vehement*.

5. In reſpect of the Place or Inſtrument whereby it is effected, it is *Soft*, or *Hard*. And ſo theſe make *Ten Primary Differences* of Pulſes. But if you conſider (or rather Phanſie) divers Particulars in any one *Pulſe*, or compare and mingle the

Pulſes

Pulſes with each other, then you may proceed *in Infinitum*; and there he turns us off to *Galen*; and thither you may go, if you delight in Quirks and Quillets, or have any time to throw away; where you ſhall find I know not what delicacies of the Touch in diſtinguiſhing Pulſes, ſo that you had need have a Finger more delicate than ever was employed in the Touch of a Lute. There you have that which is termed *Pulſus Dicrotus*, *Capriſans*, *Interruptus*, *Undoſus*, *Vermiculans*, *Formicans*, *Vibrans*, *Convulſivus*, *Serrinus*, *Impar citatus*, *Arythmus*, *Ecrythmus*, *Heterorythmus*, and I know not how many hard words more; which Modern Writers have been ſick to think of; and *Heurnius*, in his Inſtitutions, having reckoned up ſome of them, counts it but time loſt to inſiſt upon more; For (ſaith he) *reliquas Pulſuum Differentias prudens omitto*, *I think it prudence to omit the reſt*. And *Regius*, in his new *Fundamentals of Phyſick* thinks not the before-mentioned worth the delivering, *becauſe* (ſaith he) *they are in a manner inobſervable, and the nature of Pulſes may be underſtood well enough without them*. The ſame prudence (no doubt) hath guided his Brother *Sylvius de le Boe*, Profeſſor at *Leyden*,

* *Fundamenta Med. cap.* 5.

* *Disput. Med.* 8.

Leyden, in his * *Disputations* lately publiſhed, to reduce the Doctrin of Pulſes to a ſhort rational State, juſt after the ſame manner, as is done before by *Horſtius* and the *Conciliator*. And truly it was high time to reduce them, for the ſakes of young Students, ſeeing *Galen* and his Admirers (as Dr. * *Primroſe* obſerves) had mounted them to *above two Thouſand differences. The very Names of which alone* (ſaith he) *if many ſhould hear them, they would immediately renounce the touching of Pulſes; for, they would amaze and terrifie the ignorant, no leſs than if they were ſo many Magical Spels.*

* De vulgi Erroribus, l. 1. c. 15.

And when all is done, regulate the *Doctrin of Pulſes* as well as you can, tis fit I ſhould tell the world, there is little certainty of Judgment to be made by them of a Patients caſe, ſeeing every ſmall Circumſtance of * Hope, Fear, Grief, Diet, Drink, ſudden Approach of the Phyſician, Friends, or other Company, want of Sleep, and the like Accidents, will induce a notable Alteration, ſo that I am reſolved as little to credit my own Sence of the Pulſe, as a wiſe man would a *Gypſie* that croſſeth his hand to tell him his Fortune; and I would build a Prognoſtick

* Pulſus autem ratione ætatis, ſexus, Temperamenti, doloris, & affectuum animi magnopere variatur. So ſaith Henricus Regius.

noſtick upon the one, almoſt as ſoon as I would upon the other: which will be the leſs wondered at, when you ſhall find, that even thoſe Pulſes which are reputed Mortal, may be felt many times when the Patient, (though in the heighth of a Diſtemper) hath been far enongh from Death. Therefore it makes me wonder, when I ſee how wondrous wiſe ſome would make people believe they are, that will from a touch of the Wriſt deliver Oracles, and from thence pronounce Reaſons to argue a Neceſſity of Bleeding, and other Proceedings, when as nothing is more fallacious than the *Pulſe*, next to *Urines*; and yet neither of them are wholly to be neglected, but to be reputed only Acceſſaries, not Principals, in the great work of Curation. Whoſoever conceives otherwiſe, and to put his Conceit in practiſe, ventures to preſcribe Remedies accordingly, ſhall always put the Patient to hazard, and kill more than he cures.

3. Nothing needs a Rectification and Improvement more than the Doctrin about *Urines*; for, beſides the animadverting upon ordinary Abuſes of Inſpection, and pronouncing Judgement thereupon *of Urines.*

on

on, little hath been done heretofore to procure a Reformation, whereas it is the old Doctrin it ſelf that hath need to be reform'd, and no man ever yet attempted it to purpoſe, except Dr. *Willis*, who finding *that the Obſervations which concern the practiſe of that Doctrin, were* (as he ſaith)* *either ill made, or not well digeſted into Method, that Method which is deliver'd by moſt, ſeeming more Emperical than Rational*, did therefore undertake the Task, and hath excellently well performed it. *Of old, the differences of Urines were recited* barely, *as they are wont to be variouſly diſtinguiſhed, according to their* Colour, Conſiſtence, *and* Contents: *Then, to the ſeveral kinds of theſe they affix Pathological ſignifications, collected only out of more rare Obſervations; while in the mean time the cauſes of the* Phænomena, *or Preternatural Alterations in Urines, are not aſſigned as they ought to have been; nor is the ſignification of Urines, applied to the Cauſes of Diſeaſes, but only to the Diſeaſe, or the Symptom, and therefore is oftentimes fallacious and uncertain; becauſe the ſame Morbific Cauſe, as alſo the ſignification of the ſame Urine, may at once mediately reſpect divers Diſeaſes and Symptoms. And therefore*

* *In Epiſt. ante diſſert. de Urinis.*

is neceſſary, that a Doctrin or Method about Urines be inſtituted, above the vulgar Notions of Philoſophy.

He chuſes therefore another way to go to work, to give Us an Underſtanding of *Urines*: he firſt thinks fit to anatomiſe them, by reſolving them into the ſame *Chymical* Principles, of which our ſences tell us that other mixt Bodies do conſiſt.

1. *Salt* or *Saltineſs* in Urines, which is percieved by *Taſt* and *Touch*, and is either *Fixt* or *Volatile*.

2. *Sulphur*, which is ſufficiently teſtified by their Putrefaction and Stench.

3. *Spirit*; for according to the divers plenty or prevalency of Spirits, Urines do vary in their *Hypoſtaſis* and Setlings, and do Putrefie ſooner or later.

4. *Water*, or the watery part of the Urine; which though it abound more than the other Principles (at leaſt ſix to one) yet it cannot be ſo drawn away by diſtillation, but that ſome particles of the *Salt* and *Sulphur* doe aſcend with it and beſtow on it an unpleaſing Scent.

5. *Earth*

5. *Earth* and ſlimy dregs; as is ſufficiently apparent either by Diſtillation or Evaporation of Urine; For, when the other parts are exhaled, the *Earth*, like a *Caput Mortuum* remains in the bottom.

Theſe are the Principles which conſtitute the body of *Urine*, into which it is by Chymical Analyſis eaſily reſolved: And it is out of the divers combinations and contemperation of theſe, that the Accidents of Urine do ariſe, *viz.* the *Quantity*, the *Colour*, the *Conſiſtence*, and the *Contents*, which according to Sence are the moſt remarkable things about it, and the principal objects of Judgement by Urine. And beſides theſe things there is nothing elſe conſiderable in Urines.

After this he proceeds to ſhew how the Colours of Urines are to be conſidered and eſtimated, according to the different ingrediency of the ſaid *five Chymical Principles*; which being diſpatched in a very delicate and particular manner, he ſums up the whole in general thus, in reference to Colour; that the *pale Urines* do all for the moſt part ariſe from too much crudity; and moſt of the *high colour'd*

Urines

Urines from *Salt* and *Sulphur* diſſolved more plentifully, and ſometimes from aduſt recrements cocted in the *Serum*, or from the groſſer contents of the Urine. And yet the Colours notwithſtanding may ſometimes by accident be altered, and appear otherwiſe than they ought to be expected from the leſſer or greater ingrediency of theſe Principles; but by theſe we are directed to a much more probable way of Judgement than formerly, as from Colours.

Then, in order to a right knowledge of the *Contents of* Urines, he that will be a curious Inquirer, ought to reſolve them into Parts, by which means he will attain Medical directions of no little moment: For, in divers Chronical Diſeaſes, it is of great concern to inquire into the diſtempers of the Bloud exactly, that the proportion of *Salt* and *Sulphur* therein contained, and the temperature, may be rightly inveſtigated. To this end, it is convenient ſometimes to *evaporate* Urines, or expoſe them to *diſtillation*; and ſometimes to *Precipitate* the Contents of them, or *reſolve them by Putrefaction*. As *Evaporation* and *Diſtillation* ſubſerve much to the manifeſtation of the *Salty Principle*;

ſo

ſo *Precipitation* and *Putrefaction* do ſhew the groſſer Contents of Urines, both as to weight and meaſure; only *Putrefaction* is wont to ſhew the ſeveral particles of every kind ſomwhat more diſtinct, and as ſeperated from one another; for, if you let the Urine ſtand ſtill ſeveral days in an Urinal, it will be very much altered both in the *Colour*, *Scent*, and *Conſiſtence*.

Thus much I thought neceſſary for giving the Reader a Taſte of this new Doctrin about Urines; which certainly is much more agreeable to Reaſon, than any thing that ever was ſaid before upon that Subject, and muſt needs be abundantly more conducible to the practiſe of Phyſick, ſeeing it directs our Judgment, not by mere outward Appearances, and bare Obſervations, as of old, but by an accommodation of our Underſtanding to the real Principles which are in Urines, the ſame as in Men's Bodies: from whence doubtleſs a more certain way of Judgement muſt needs ariſe, than can be imagined by any other courſe that may be taken, to judge by Urines concerning the State of the Bloud and its Diſeaſes. I cannot therefore but commend that tract

of

of Urines to ingenious Practiſers, as a more ſure guide than any that they can meet with in former Authors; and exhort them, by manifold Obſervations and Experiments in their way of Practiſe, to follow the example given them, for the improvement of that Doctrin, and the ſetling of a right Method in this part of Phyſical practiſe, for time to come: And I hope it ſhall not be the leſs acceptable, as other new things have been, becauſe it requires more care and trouble, than the lazie formal ſort of Profeſſors are willing to beſtow; For, I have ſeen, that the knowledge which comes by it will abundantly recompence the labor, by diſcovering the Morbifick Cauſes in particular perſons.

4. The reputed Oracles of our Profeſſion, *Hippocrates* and *Galen*, are in the next place to be inquired into; whom though we ought not to reject, but to allow them the honor due to them, becauſe they were men famous in their generations, yet know they were but men, albeit, ſome have endeavoured to make Gods of them; and truly, but children in the Art, ſuch as lived in the nonage of true Philoſophy and Phyſick, if they

A brief cenſure of Hippocrates and Galen.

be compared with the learned of this latter Age. I would not detract from them, becauſe for ſome things we are beholden to them, eſpecially to *Hippocrates*; but tis neceſſary to be a little brisk in expreſſion, becauſe the world is apt to dote upon old Authors, eſpecially when they hear of honors little leſs than Divine given to theſe Erroneous Heathens: And ſome that ſpeak loweſt of them, ſay, they were infallible in the Things which they have left us. I remember *Jo. Langius*, in one of his Epiſtles, ſaith as much of *Hippocrates*, that he was *fallere ac falli neſcius*, one that could not deceive nor be deceived; which ſaying he borrowed out of *Macrobius*. But it is the humor of many men, upon the credit of other men to fall a commending what perhaps they never ſaw, or did never underſtand, and ſo the Commendation paſſeth Cuſtomary and current from one to another, till the generality even of the learned come to give up their belief to what others have ſaid; and ſo men happen to become famous Authors, as other men many times have the good fortune to grow rich, though they never deſerved it. And yet we cannot but acknowledge theſe two were witty

witty men, learned and able as the times went then, and I do belive they were Masters of so much wit, that could they now revive, and see what an Advance and alteration hath been made in the state of Physick, they would by common ingenuity be induced to quit their own Principles, as very rude and insufficient, if compared with others: wherefore we have reason with thankfulness to own what we find approvable in them, but not to lie down *sub magni nominis umbrâ*, under the shadow of a great name, and make an Idol of it; We should rather reject what runs to superstition, and not pin the Faith of mankind upon the sleeve of *Hippocrates*, because others have done so; And yet some there are who have been so bold, as to sift, and note, and upon occasion reject him.

A Censure of the Aphorisms of Hippocr.

¶ The most Oraculous parts of him are supposed to be his *Aphorisms*, and his *Prognosticks*. As for the *Aphorisms*, we find him tripping there at every three or four steps, when he comes to Points of moment: the rest, which are true, do for the most part fall under the observation of every Nurse, and so in such common things every She may be as Divine as He.

To clear this, it will be worth the while to take a brief view of them.— The First Book of *Aphorisms* contains only Rules which concern the Physician himself, what Caution he ought to use in prescribing *Diet*, and *Purgation*. The five first *Aphorisms* are of some moment, also, the tenth, eleventh, and twelfth are good, which forbid feeding a Patient at the time of a Paroxysm, and in the heighth of a Disease, which certainly neither the Patient himself will do, nor any body else that hath common reason permit, if he would, or could feed, being in such a condition. The 22. is false in many Cases, and destructive in others; for, it commands us to delay purging, till Crudities be cocted; and the greatest part of them are incapable of Coction, especially in the Diseases of this Age. The 24. which allows us but seldom to Purge in the beginning of a Disease, and that with great Caution, is also very destructive; for, if ever it be lawful to Purge boldly, then is the time, because the *Orgasmus* or fury of redundant humors commenceth, and the Patient is then most able to bear the Remedy. But the less regard is to be given to this *Aphorism*, because it is directly contradictory to another

ther in his ſecond Book, *viz.* the 29. which is indeed more rational; where he injoyns us to Purge, if at all, in the beginning of a Diſeaſe, becauſe (as *Heurnius* well ſaith upon the Text) it gives a Revulſion to the raging Humors, and takes off their Fury: And this is all that is conſiderable to be noted on the Firſt Book.

In the *ſecond Book* the Firſt *Aphoriſm* of Note is the 10. which commands us, before we Purge, to render the Paſſages paſſable. This concerns not us ſo much in this Age, who have ſuch noble remedies as will unlock the Paſſages, as well as draw away the Humors, at one and the ſame time, and both theſe with much kindneſs they will do: But it is very neceſſary to be obſerved by ſuch as ſtill uſe the old Purgers, which are (more or leſs) of a violent and Malignant nature; ſo that if the bad Humors cannot ſtir, the good Humors are forced, and being more fine, run away like a Torrent, to the great impairing of the Body. —The 20. hath nothing of certainty in it; which ſaith, that young men whoſe Bodies are laxative grow coſtive when they are in Age, and *è contra*.—The 23. which ſaith that Acute Diſeaſes come to a *Criſis* in fourteen

daies time; and the twenty fourth, which pretends to describe a certainty of Critical Motions, are fond and false, as I have already proved the whole Doctrin to be which concerns *Crises* and *Critical daies*. And truly, he before in his nineteenth *Aphorism* confesseth enough to overthrow all that Doctrin, saying, that the Predictions of the Events of *Acute Diseases* are uncertain. — The 36. saith, that Purgations in healthy Bodies, and in Bodies abounding with ill Juices, are impairing of the strength and vigor: which is a kind of Riddle that none of the Commentators can solve; for, if in both these Cases a Purge be pernicious, when (I pray you) shall it be administred? But this may well enough suit with most of the old Purgatives, which will sufficiently afflict bodies, be they Sound or Sick; though God now hath furnished us with such, as either in Sound or Diseased bodies, will operate with facility and pleasure. —— The 37. agrees with the former. The 41. saith, they which are subject to *Swoundings or Faintings*, die suddenly: which every daies experience proves manifestly false; for, no Afflictions are more ordinary and common than these, yet without any such con-

consequent at the Heels of them.—The rest in that Book are most of them agreeable to the common Dictates of every man's Mother-wit, that hath seen any common Accidents and Circumstances concerning the Sick.

In the third Book, the three first are little considerable; and from the Third to the twenty fourth Aphorism, you have nothing but common Notions and Prognosticks about the effects of the various Turns of weather, and of the several Seasons of the year, in causing Diseases; some of which Particulars are false, others frivolous, the rest are *& Lippis & Tonsoribus nota*, obvious to every one; and the whole is more fit for an Almanack than the great Monument of Physick. The other which follow to the end of the Book, onely tell us what we all know, *i. e.* what Diseases are wont to befall Children and old People.

In the fourth Book, he begins with great-bellied Women, and saith, if you purge them, it may be done in the fourth month till the seventh; but not in the First months, nor in the last. This might be an useful Caution in those daies when they had none but violent Purgers; but

what is that to us now, on whom God hath beſtowed more Delicate Means? Why is it, that Phyſicians permit women all the time of their Childing, many times to labor and languiſh under a Load of turgent Humors, and very few of them think it fit to venture a Purging? I do here profeſs, that I have in the firſt months both Vomited and Purged them frequently with Succeſs, and ſo likewiſe Purged (but not Vomited) them after the ſeventh to the very laſt of their Child-bearing, and never did I find any Inconvenience therein. And doubtleſs, others may do the ſame, if they pleaſe to take pains in fitting remedies of their own for the purpoſe, and by this means free women from thoſe ſorrows which (many of them) indure for want of ſuch a neat Aſſiſtance. But be ſure to do it onely with Remedies of your own preparing, which a good Phyſician ſhould alwaies have ready at hand.—The 4. *Aphoriſm* ſaith, Winter is for *Purging*, and that Vomiting ought to be preſcribed in the Summer. Till we have ſome good Reaſon for this ſaying, know that either of them may be done either in Summer or Winter, with good Medicins.—The 5. bids us not Purge before, nor in the

the *Dog-daies.* — The 6. and 7. relate to the ſame Buſineſs: But know this, that delicate Vomitories and Purgatives may be given at any Seaſon of the year: yea more than this, I upon occaſion plentifully Purge my Patients in the Winter, though they keep Shop, or go abroad about their Buſineſs: But this is not to be done by any one that is not Maſter of the like Remedies. Far be it from me to mention this in oſtentation; but I cite every daies experience, to ſhew the frivolouſneſs and uſeleſneſs of old Maxims and Medicins. — The 8. forbids Vomiting in a *Conſumption.* But this holds not; in ſom Conſumptions, which are attended with a recourſe of Serous Matter to the Lungs, nothing is better than ſuch a remedy. — The 12. ſaith, that to Vomit perſons in the Winter that have the Flux called *Lienteria*, is dangerous: And this perhaps might hold true ſtill, if we had no other Vomitories than what he had, ſuch as *white Hellebore, &c.* but know this, that in all Fluxes, nothing brings more advantage, both in regard of Revulſion and other Reaſons, than a good conditioned Vomit doth in the beginning of Fluxes, at any time of the year: but ſuch violent

Vomits

Vomits as by *Hellebore* and the like Medicaments, of which he ſpeaks afterward in the 13. 14. 15. and 16. Aphoriſms, are not for the work.— The 18. which ſaith if the Patient's pain be above the Midriff, he is to be Vomited; if beneath, then he ought to be Purged, is very fallacious; and particularly, I avow it in the caſe of *Pleuriſies*, in which moſt Phyſicians do obſerve the Rule of this Aphoriſm. The 38. the 39. and the 41. deliver vain Things. One ſaith, *in what part ſoever moſt Sweat doth appear, there is the ſeat of the Diſeaſe.* Another, *that the part where cold or heat is firſt perceived, is the ſeat of the Diſeaſe.* Another, *that if Cold and Heat by Turns, frequently invade the body, it argues the Diſeaſe will be of long continuance:* than all which particulars, our conſtant experience tells us nothing can be more fallacious.—The reſt of the Aphoriſms to the 69. deliver obſervations about Fevers, which ſuit with the Fevers of this Age, as ill as my old Shoes would fit a *Coloſſus*; and ſome of them relate to *Criſes* and *Critical dates*, which we have already thrown out of doors; and certainly with good reaſon are theſe things to be ſlighted now, becauſe the whole Scene of Fevers (as

hath

hath been already ſhewn) is exceedingly alter'd; and therefore thoſe Aphoriſms which were calculated for the Meridian of an Age ſo long ſince paſt, may come in faſhion again hereafter, when the *Platonick year* ſhall, in its revolution, reduce all things to their antient ſtate. And yet ſome of theſe are in part true; but they are thoſe *Aphoriſms* only which deliver the Signes and Tokens of approaching Death, which will be one and the ſame, for the moſt part, to the end of the world.—From the 69. Aphoriſm to the end of this Book, they give Judgment upon Urines; and ſo are very uncertain, as might be made ſufficiently to appear, could I inſiſt upon every Particular. But this being enough, to have run through the four firſt Books of *Aphoriſms*, I ſuppoſe the Reader is by this time ſufficiently convinced of their uſeleſneſs, and informed what to gueſs of the three other Books (for, they are ſeven in all;) therefore I avoid them, that I may not be tedious, but do affirm them like the other.

Now leſt men ſhould turn tail at me, as a perſon ſingular and ſaucy, becauſe I preſume with reaſon, to paſs my Judgement upon that which hath been accoun-

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ted the moſt creditable Piece of an Author ſo admired as *Hippocrates*; therefore to ſhew that I am not alone, and that others before me have taken the boldneſs to cenſure him, I will bring in the learned *Sanctorius*, who hath ſpent one * Chapter to ſhew, that the Aphoriſms are not of ſuch verity as men have cried them up to be. He takes notice of the 41. Aphoriſm of the fifth Book, which ſaith, *that if a woman take honey'd water, going to bed, and find wringing pains thereupon in her Belly, it is an Argument that ſhe hath conceived with Child: If no pains, then, that ſhe is not with Child*: which though *Galen* endeavors to juſtifie by giving reaſon for it, yet my Author proveth his pretence of reaſon to be of no value, and blames *Avicen* for pretending the like. And beſides *Avicen*, he tells of others that have labored hard to ſave the credit of *Hippocrates* about this *Aphoriſm*; *yet* (ſaith he) *I have often tried the Experiment, but could not obſerve any ſuch Pains enſuing.* He tells us alſo, *He denies that an odoriferous Fume received by the genitals of a woman, will, if ſhe be not with child, always penetrate up inwardly to the Noſe*; which is avow'd in one of the Aphoriſms; *becauſe the paſſages of the Womb*

* *Meth. vitand. Error l. 1. cap 31.*

may

may be cloſed not only by a Conception, but by a falſe Conception, by ſuppreſſed Menſtruals, by Fat, by Tumors, and by ſix hundred other Cauſes, as we know by Experience.— He reproacheth alſo that Aphoriſm which ſaith, *if a woman with child hath conceived a Male, She is lively coloured in the face, if a Female, then ill-coloured: For, who* (ſaith he) *can defend this Aphoriſm to be alwaies true? How many women have we ſeen ill-coloured, being great with a Male, and well-colour'd with a Female? In the* 31. *Aphoriſm likewiſe of the ſixth Book, if a woman with Child be taken with an acute Diſeaſe, it is deadly; who can defend this to me, who have ſeen women ſometimes ſeized with acute, and very acute Diſeaſes, and yet they have eſcaped? Moreover, in the* 79. *Aph. of the fourth book, it is ſaid, that ſandy ſettlings of urine betoken the Stone in the bladder: No man of underſtanding would maintain this, ſeeing ſuch urines have been very often obſerved, without ſuſpicion of the Stone. In like manner in the* 70. *Aphoriſm of the fourth Book, it is ſaid, They whoſe urines appear troubled like the urines of Beaſts, either have pains in the head, or ſhall have; and yet we have ſeen many ſick have ſuch urines, who never had a pain in the head throughout* Lib. 5. Aph. 42.

all

all the time of their ſickneſs. Ecce quàm Hippocratis ſententiæ ſunt æternæ veritatis! *Lo* (ſaith he) *how the ſentences of* Hippocrates *are of eternal verity! Galen* therefore, to ſave the credit of his Leader, would have it thus underſtood, *that though they be not all, yet they are for the moſt part true*; and this excuſe of his is recorded in his Comment on the 58. Aphoriſm of the ſixth Book, which ſaith, *that if the* Omentum *the Kall ſlip out, it neceſſarily putrefies*; where he ſlubbers over the matter, ſaying, *though it fall out otherwiſe, yet it is in a great part true. But* (ſaith *Sanctorius*) *conſider the words of* Galen *well which follow*, who ſaith, *when this Aphoriſm and the reſt of them are ſaid to be of eternal verity, it is to be underſtood in a Figurative form of ſpeech that they are ſo, though the very things do not come to paſs:* which is as much as to ſay, that only in a *Figurative Sence* they are true, but in a *real Sence* they are not ſo. And what is this (I pray you) but to give away the Cauſe, and the credit of the Aphoriſms in a fine way of ſpeaking? Therefore I cannot but wonder how *Galen*, who firſt caſt this *Figure* in favor of *Hippocrates*, hath been able ever ſince to conjure all poſterity quite out of their Sences into

into an admiration of those *Aphorisms*, which may (many of them) like the Oracle of old, be taken in both constructions, *Pro* or *Con*,

(*Aio te Æacidem Romanos vincere posse*)

for, men have been exceeding tender of touching them, and mighty careful to save the reputation of them, because they were his, who had the luck to be cried up for Prince of the Profession, and it hath been the business of Commentators ever since to hold him up; as if the credit of Physick must needs fall to the ground, if that man were detected of Error, who in an ignorant Age, imposed upon the world his own *Dreams*, as matters of *Eternal Verity*. I must profess I would not willingly detract from the Antients; *Amicus Hippocrates*, *Amicus Galenus*, *sed Magis Amica Veritas*; we ought to have a greater value of Truth than of *Hippocrates*, or *Galen*, especially when tis clear, that the holding up a reverence to them is a Prejudice to Truth, and hath been the main *Remora* to the advancement of so noble an Art as that of Physick. *Agitur de Corio Humano*; Men's precious lives are at stake

ſtake in the buſineſs, and it is the general intereſt of mankind that I have a regard to in this liberty that I take, which ought to be preferr'd before the Intereſt of any particular Corporation, or Sect of Phyſicians whatſoever. In my younger daies, I came at firſt to the reading of theſe Aphoriſms with as reverend a regard as any of them, and ſince that, made it my buſineſs to * ſay them by heart; by which means being inabled to produce them, or ken them to my ſelf, upon any occaſion, I have had the greater opportunity to obſerve the uncertainty and fallacioufneſs of them: nor do I find leſs Frailty in thoſe other Works of his which are counted the moſt legitimate.

* *For eaſe to the memory,* Ralph Winterton *of* Cambridg *publiſhed them in verſe both* Greek *and* Latine. An. 1633.

As for the three Books of *Prognoſticks*, ſo much as is true in them, is of no higher a nature, than what falls under the obſervation of the meaneſt perſons that have to do about the ſick: which makes me wonder, that ſo wiſe a man as *Heurnius*, ſhould beſtow theſe Flowers to adorn them; *that they are moſt abſolute, and full of Divine Oracles, and never reprehended in the current of ſo many Ages*; And yet now for all this, they ought not to be uſed more kindly than they deſerve: For, perceiving in

A Cenſure of the Prognoſticks of Hippocr.

in the courſe of Practiſe, that many of them, and of the *Coacæ Prænotiones*, did fail me, I could not, at firſt, tell what to think of the reſt; but afterwards, having the ſumm of them reduced into order under certain Heads Alphabetically, after the manner of *Common Places*, ready to be produced, I began to compare them upon occaſion in obſerving the Sick, and by this means I am the better able to adviſe others to be wary how they truſt them, becauſe they have ſo often deceived me.

In the Firſt Book, the *Firſt* noteth the Poſture of the Face in Acute Diſeaſes; *If Noſe be ſharp, Eyes hollow, Temples fallen, Ears cold and contracted, Skin dried, Colour pale, black, or leaden, it is a dangerous ſtate*; and pray you who is ignorant of this Truth? Not an old woman in all the Town but will ſeal to it. And yet out of this ſtate men daily recover, and are apt to fall into it upon every light occaſion, as by over-Watching, Faſting, and immoderate Fluxes; which he himſelf in the very next *Text* admitteth; and to thoſe might have added alſo *exceſs of Venery*, *Traveling*, *Study*, and the like; either of which will preſently bring a man's coun-

Text. 3.

Text. 4.

tenance to be the picture of this *Facies Hippocratica*; but of these he takes no notice, but records onely the other three to be consider'd by the Physician upon his first access to the Patient.— The *fourth Text* makes Observations upon the Eyes, and pronounceth them deadly; to which I say, though the Eye be the *Index* of the Soul, and gives us, in many Cases, a notable guess at the inward state, yet the Judgments grounded according to his descriptions touching the Eye, are every jot as fallacious, as are the common Prognosticks upon Urines; yet upon these and the Eye-lids he bestows two Texts more.— From thence to the 17. Text, he dwells upon the Postures of lying in Bed, and gestures of the Hands; and the summ of all he saith is, that those postures and gestures are best which are most like the usual postures of men in health: *Et è contra.* Such Oracles as these are obvious, and are delivered at the fire-side by every old woman that attends the Sick. And yet let me tell you, he that ventures his credit in Prognosticating upon *postures* and *gestures*, shall assuredly give cause ever and anon to be laughed at.—The 17. and the 18. tell us, that *in acute Diseases a cold Breath is deadly;*

deadly; and that *eaſie breathing portends good, but ſhort breathing, and great breathing, pain and inflammation in the Breſt*, and a *Delirium* at hand; which ſometimes may be ſo, but more often it is not ſo, as we all well know; and I ſhould be loth to be guided by ſuch *Phænomena* as theſe in the ordering of a Patient, ſeeing they fall out often, where there is neither *Pain*, nor *Inflammation*, nor a *Delirium* ſubſequent: Eſpecially in *Scorbutick Fevers*, as moſt of the Fevers now extant are. The 18. and 19. are about *Sweats*, and tell us, thoſe Sweats are beſt which abate the Fever, and that *cold Sweats*, and *partial or imperfect Sweats*, *are bad*: Thus you ſee all along, that what in theſe *Prognoſticks* is true is but very ordinary ſtuff. —— From the 19. to the end of this Firſt Book, he treats of Abſceſſes or Tumors in the Hypochonders, in Fevers; which in *acute ones* are ſeldom ſeen, but in other Fevers, and Agues, they ſometimes happen, and but ſometimes; and then uſually when the bodie's habit is vitiated by prepoſterous waies of Curation.

In the ſecond Book of *Prognoſticks*, after three Texts ſpent about *Dropſies* (the ſecond whereof is Oraculous, becauſe a

Riddle) He tells us in the fourth, that *if the Head, Hands, and Feet grow cold, while the middle parts burn, tis ill, and that it is beſt, that the whole Bodie ſhould be warm and ſoft.* —The 6. ſaith, *blue or livid Hands and Feet betoken Death, and that it is not ſo bad, if they be black*, which two Texts every body will grant, and preach on as well as the beſt Doctor; but the concluſion of the latter, which ſaith, *that if the Patient happen to eſcape with life, yet the parts blackiſh will gangrene*, is moſt falſe.—The 5. is common ſtuff, which ſaith, *tis good, if the Patient can turn and rouſe himſelf cheerfully; but dangerous, if he be ſluggiſh.*—In the 7. he is very common likewiſe in his Prognoſtications touching ſleep.—From thence to the 20. he treats of *Stools*, and out of the cloſe-ſtool Pan he delivers Oracles, which are ſome true, and none of them alwaies true; yea the beſt of them about Stools are not frequently true; but it may be ſo, and it may more often not be ſo; for, tis very often to be ſeen, that the worſer the Stools are which paſs from the Patient, the more relief he receives, and the more ſpeedily he recovers, Nature carrying off that way the Malignant matter of the Diſeaſe. —From thence to the 34. he plaies the

Piſſe-

Piſſe-Prophet, and undertakes to prognoſticate from the Urinal, *quaſi vitro magico divinare*, to *divine as it were by a Magical glaſs* (it is Dr. *Willis* his expreſſion) and I hope thoſe ſentences ſhall not be admitted for Oracles. The reſidue of this Book toucheth upon *Vomitings*, *Spittings*, *Expectorations*, and *Purulencies*; of which it is certain, that to judge ſo poſitively of a Patients condition by Colours and Conſiſtencies of *Vomits* and *Spittles*, is a very idle thing, ſeeing thoſe which appear worſt do (as we find) very often tend to the beſt: And as for *Purulent Perſons*, it was the Impotency of the old Phyſicians, which in Diſeaſes of the Cheſt, could not ſo mannage a Cure of them (I inſtance a *Pleuriſie* for one) as to prevent a termination of them in *Purulency*. *In Epiſtola ante librum de Fermen.*

In the third Book, the four firſt Texts diſcourſe of *Criſes* and *Critical* days; of which I have already eaſed the Reader. —The 5. and 6. determine upon what Terms you are to expect *an eruption of Bloud by the Noſe* after the 20 day of a Fever. But of what uſe is this now? when ſome of us are aſhamed to ſee how long people are held in Fevers under

cure, not only till the 20. day, but long after; whereas in fewer days a hopefull account may be given, if at all, except error be committed by the Patient, or his Attendants. —— From thence to the 16. treating of *Exulcerations* of the Mouth and Throat, and *Quinsies*, his Doctrin is good. —— The 16. relates to *Critical days*, and so is not worth the noting. —— From thence to the 24. he treats of *Abscesses* or *Tumors* at the Tail of long Fevers and Agues; which are very rare to be seen in our days, only in some few they so fall out. —— From thence to the 30. he treats of *Head-ach in Fevers*, and saith, *If the Disease begin with Head-ach, the Patient becomes more afflicted the* 4. *day than on the* 5. *but is better again on the* 7. Again, *if the Head begin to ake on the third day of the Fever, then the Patient will be most afflicted on the* 5. *but will be freed from the Disease on the* 9, *or on the* 11. *day*. Again, *if the Head begin to ake on the* 5. *day then expect a Crisis on the* 14. all which, he saith, holds good in *Continual Fevers*, and *Exquisite Tertians*: But let the Reader observe these Fevers, and he shall generally find all this to be fallacious and frivolous. And yet he concludes his Books of Prognosticks

noſticks with this Magiſterial Aſſertion; that they will be found to prove true in *Libya*, that is to ſay in the hotteſt Country; and in *Delos*, i. e. in a temperate Country; and in *Scythia*, i. e. the coldeſt Country; which is as much as to ſay, they will hold certain in all Times and Places, having been ſo Calculated for the Meridian of *Greece*, his native Country, that they will ſerve indifferently for all Climates and Nations in the world: And this the Commentators will not ſtick to ſwear on the behalf of their great Maſter; though they cannot be ignorant, that things ſeldom fall out ſo: but the Trading upon old Notions muſt be held up, and there is the Buſineſs; If we recede from old Things, and ſuffer a reformation in any (ſaid the Council of *Trent*) it will take off all reverence to the reſt: I ſhall not apply it to the Concernments of Phyſick, but leave impartial men to judge, whether ſome Profeſſors Intereſts, and Ignorance alſo, may not lie in the way of ſo neceſſary a work, as reforming and redeeming of ſo Noble a Profeſſion; and what Credit is to be given to one that contradicts himſelf, I mean this *our great Maſter*, who forgot that the 19. Aphoriſm of his ſecond Book confutes all

that he delivers here as certain about Acute Diſeaſes; for there he ſaith, that the *Predictions concerning ſuch Diſeaſes are uncertain.* And whereas he hath ſo impertinently ſaid, that his *Prognoſticks* will hold certain in all Countrys, I note it clearly contradicts the reaſon of his * *ſecond Aphoriſm*, which bids us in Evacuations of the Body, have reſpect to the difference of Countries, in regard the ſame Effects cannot be expected in all alike, becauſe (as *Heurnius*, who hath collected the ſenſe of the beſt Commentators upon the Text, ſaith) *according as a Country is hot, cold, moiſt, dry, or windy, and according to the manner of feeding uſed therein*, ita variis ſuccis circumfluent corpora, *ſo mens bodies will abound with various Juices*; from whence I argue, that if the Blood of mens Bodies differ according to their reſpective Countries, then by a parity of reaſon it follows, the Motions of it, and Operations, and Effects thereupon depending, muſt needs be different; and ſo tis impoſsible that the ſame Events in reference to ſpontaneous Evacuations ſhould fall out alike, in ſeveral Countries & tis much leſs to be expected they ſhould ſo in regard Nature doth ſo particularly obſerve

* *Lib.* 1.

ſerve the Climate (as is implied in that *ſecond Aphoriſm*) that you cannot without prejudice force her by Art, to any Evacuation or excretion, which is not agreeable to her in the particular Country where ſhe is. What then (I pray you) can ye think of one general Uniform Rule of Prognoſtication, touching the *Phænomena*, and the Events of Diſeaſes, in all the Countries of the World? I am ſory I have grated ſo hard upon this buſineſs, but it cannot be avoided: It is no more than what ſome of the more ingenious ſort of men have been aiming at before; only, becauſe in thoſe days it was not convenient to diſcredit the old Learning, when they had no better to ſubſtitute in the room of it, therefore they endeavoured to ſalve all ſores, and touch them very tenderly; but I ſay,

——— *Immedicabile vulnus*
Enſe recidendum eſt. ———

There is no redeeming of our Faculty, but (as my Lord *Bacon*'s expreſsion is) by attempting an Inſtauration *ab imis fundamentis*, from the very foundations, and by taking off in the firſt place, that ſuperſtitious *Novum Organ. Aph.* 31.

perſtitious reverence which hath been ſo long paid to the antiquated Maſters of the Profeſſion.

Thus much then for *Hippocrates*, touching whom I could ſpin out a volume by inſiſting upon other Works of his; but let it ſuffice, that * *Sanctorius* gives one Caution touching his Sentences, *that ſometimes they are not true*; and many of them have been detected by the induſtry of this latter Age. Mr. *Boyl* alſo is loth to ſpeak out, becauſe *he hath* (he ſaith)* *a great reſpect for* Hippocrates; *and were it not for that, he ſhould venture to ſay, that ſome of thoſe rigid Laws of* Draco (*whoſe ſeverity made men ſay they were written in Bloud*) *did perhaps coſt fewer perſons their lives, than that one Aphoriſm of* Hippocrates, *which ſaith, that* if a Teeming woman be let bloud, She will miſcarry; *for, it hath for divers Ages prevailed with great numbers of Phyſicians, to ſuffer multitudes of their Female Patients to die under their hands, who might probably have been reſcued by a diſcreet Phlebotomy, which Experience hath aſſured us (whatever the cloſe of the* * *Aphoriſm ſaith to the contrary) to have been ſometimes not only ſafely, but uſefully employed, even when the Infant is grown pretty big. By neglect of this, numbers of Teeming women have*

* *De vitandis error. lib* 15. *cap.* 11.

* *Experi. Phil. part* 1. *pag.* 6.

* *Hippocr. Aph.* 31. *lib.* 5.

have been ſuffer'd to periſh, who might probably, by a ſeaſonable loſs of ſome of their bloud, have prevented that of their Lives. And the ſame noble perſon having ventured to ſay thus much, goes yet a little further, and ſhews the great inconvenience of reſting upon *Prognoſticks*, and what mitchief it doth in the practiſe of Phyſick, becauſe upon the credit of them many times a Patient is judged incurable, and ſo left, when as it is no ſuch matter: *For* (ſaith he) * *That in Acute Diſeaſes, Perſons given over by Phyſicians may recover, the more judicious even of thoſe Galeniſts that are of a deſpondent temper will not deny: For, not only* Celſus *gives us this ſober admonition,* * that Phyſicians ought not to be ignorant, that even in Acute Diſeaſes the Signs both of life and death are fallacious; *but even* Hippocrates *himſelf, who was ſo skilful in Prognoſticks* confeſſeth, that the Predictions in Acute Diſeaſes are not wholly certain as to life and death. *And even in Chronical Diſeaſes, where Events are wont much better to anſwer Phyſicians Predictions, there are ſometimes ſuch Cures performed, as may encourage humane induſtry, and keep a ſick mans Friends from forſaking the Cure of him.*

* *Ibid p.* 73.

* *Neq. ignorare oportet, in acutis morbis fallaces notas eſſe & ſalutis & Mortis.*

him. For, it hath been often seen, that divers persons given over by some Physicians, have been cured by others, perchance more lucky than more skilful, by the use of extraordinary, powerful, and especially Chymical Physick. Which discourse falls in very pat with what the same learned Gentleman saith in another place, * *viz. That the Prognosticks hitherto current in Authors, and commonly made by Physicians, do suppose the use of the Received Remedies, and of the Dogmatical Method of Physick; but if there were discovered such generous commanding Medicins, as by powerfully assisting Nature, or by nimbly proscribing the Morbifick Matter, might enable Nature to hinder the Disease from continuing its Course, and acting its Tragedies in the Body, then Physicians would not need in Acute Diseases to wait so long for a* Crisis *to instruct their Prognosticks.*

* *Ibid Essay*, 3. p. 66.

Thus he: Which is indeed as much as I would say, and all that I intended when I did set Pen to Paper against *Hippocrates* his Aphorisms and Prognosticks, *viz.* to shew, that a precise regard to them doth but puzzle a Physician in his work of Curing, and dispose him to commit many errors, supposing such and such signs

ſigns will produce ſuch effects, and have ſuch events as thoſe Books of *Prognoſticks* do tell him; and that therefore his main work is only to watch the motions of Nature, and wait for *Critical Solutions* and Excretions, and do juſt nothing, or what is as good as nothing, adminiſter faint, languid remedies, which are of no force either to forward Nature or to hinder her; whereas if he were Maſter of more noble Remedies, there needed not this expectation to the 14. or the 20. day in *Acute Diſeaſes*, but the Courſe of them might be cut off betimes; and in *Chronick Diſeaſes*, they would not be ſo frequently led aſide, to uſe this or that Method and Remedie, which they ſuppoſe, upon the credit of old Aphoriſms and Prognoſticks, fit to be uſed, when as perhaps it is quite contrary to the nature of the Diſeaſe, and pernicious to the Patient. In a word; the Maxims and Predictions of this Author, and the Determinations of other old Authors, might (ſo far as they have any thing of Truth in them) be of ſome uſe, if we had no better Remedies than thoſe of the Shops to relie on; or if Diſeaſes themſelves were not ſo exceedingly alter'd from what they were when thoſe Authors

Authors were living. But the Caſe being alter'd, a new ſtate of things requires *new Medicins*, and *new Methods*, with other *Aphoriſms* and *Prognoſticks* more agreeable thereunto.

Thus, the greateſt ſtreſs of reputation lying upon *Hippocrates*, I have inlarged ſo much upon him, that I ſhall need to ſay the leſs of his Commentator *Galen*, becauſe he writes after him; but ſomtimes he * contradicts him; as when *Hippocrates* forbids the giving of Food to Patients before Paroxyſms or Fits, the other ſaith it is not alwaies good, for that Cholerick Perſons, if they be not fed in the beginning of a Fit, are apt to fall into a *Maraſmus*. *Lo then* (ſaith * *Sanctorius*) *how thoſe Medical precepts are often apt to deceive us, if they be not diſcreetly heeded!* As for *Galen* Himſelf, the ſame learned man hath taken good pains to wean us from our Superſtitious devotion alſo towards him, having reckon'd up at leaſt 31. of his Errors, ſpending upon him four or five Chapters to that purpoſe: And whereas *Galen* ſeems moſt to triumph in his Book concerning the Uſe of the parts of man's bodie, that Excellent Anatomiſt *Veſalius* ſhews him to have been very ignorant of Anatomie, and that he

* 8 *Meth.* 2.

* *De vitan. err.* l. 15. *cap.* 11.

he never performed one Anatomical Diſſection, ſo that it is ſuppoſed he took things upon Truſt, and tranſcribed out of other men's works; for, he proves him to have erred in one Hundred and Sixteen Particulars touching Parts.

Therefore, the more regard is to be given to what *Sanctorius* ſaith, *that ſeeing* Galen *hath erred, if he ſpeak contrary to our Senſes, why ſhould we not reject him? and foraſmuch as he is neither an Allie, nor Kinſman of mine, nor Uncle to any of my Anceſtors, that I know of, nor Canoniſed in the catalogue of Saints, as one that had been by Divine power inſpired, I ſee no reaſon* (ſaith he) *why we may not all honorably relinquiſh him.* Wherefore, after he hath reckoned up his Errors, he tells us, that yet there are many men of no mean reputation, *who had rather derogate from their own Senſes, than from* Ariſtotle *or* Galen, *and who mortally hate and rail againſt ſuch as would debate things with freedom.* And of this Temper (he ſaith) *Jacobus Sylvius* was againſt *Veſalius*, calling him, in alluſion to his name, *Veſanus*, that is to ſay, mad, or not right in his Wits, and his moſt excellent Book of Anatomie he calls *a filthy Sink, a rude indigeſted heap of ſtuff*, and Lib. 3. c. 15.

there-

thereupon exhorts the Readers to tear it, ſtamp it under foot, and throw it in the fire. At length, after all the bitter Invectives that he could make, he humbly beſought the Emperor, to puniſh *Veſalius*, as *a Monſter of ignorance, ingratitude, and arrogance*; and this for no other cauſe, but that he relied more upon his own Senſes than the Authority of *Galen*. Indeed *Sylvius* was a very learned man (as his numerous Writings do ſhew) but a little too Hot-headed with zeal for his Maſter; as moſt *Galeniſts* uſe to be, againſt any that would Dethrone him from the Infallible Chair, and the Principality of Phyſick.

And yet I muſt needs deſire a little more of their patience, to hear how he who made it his buſineſs to contradict, and trample down all the Phyſicians of his time, became guilty at laſt of contradicting himſelf; and thus it will alwaies be when men write with vain glorious pride and choler.

About the beginning of his Book *De Tremore & Palpitatione*, he ſaith, *Trembling is an involuntary Motion of the parts*; yet a little after he adds, that *Tremblers have*

not

not Motion without the Command of the Will.

In his ſecond Book *De Febr. Diff. cap.* 1. he ſaith, *a Semitertian is of the number of Continual Fevers.* The ſame in effect he ſaith *in Comm.* 2. *in lib.* 6. *Epid. cap.* 22. and yet in his Book *De Typis* he affirms, *that a Semitertian is not alwaies Continual, but ſomtimes Intermitting.*

In 13. *Method. Med.* and in many other places, he ſaith, the *Splene is nouriſhed with the groſſeſt blood, much more groſs than that with which the Liver is nouriſhed:* which he directly contradicteth in *lib.* 4. *De uſu Part.* ſaying, *that the bodie of the Splene being finer than the Liver, and thicker than the Lungs, it is deſervedly nouriſhed with the finer part of the bloud.*

In that little Tract of his, wherein he diſcuſſeth the Point of Purgation, he ſaith, that *Serous and thin humors you are to purge in the beginning, but in groſs and viſcous humors you are to expect concoction.* But note that he ſaith alſo, *that all thin humors are crude;* which *Aſſertion* he *in many places oppoſeth*, ſaying, *that all crude humors ought to be concocted before they be evacuated*; which he before limited only to groſs humors.

* *Ex Comment.* 1. *in lib.* 1. *Epid. cap.* 24.

In his 2. Commentary upon the *Prognoſticks, cap.* 36. he ſaith, *Children concoct all things very ſpeedily, by reaſon of the ſtrength of the Alterative power, which is ſtronger in them than in young men.* The like he declares *Comm.* 3. *in lib.* 6. *Epid. cap.* 15. and in his 3. *Comment. in Prognoſt. cap.* 34. But all theſe places he contradicts in his *Comment* upon the 27. *Aphoriſm, lib.* 3. where he ſaith, that the *Diſpoſitions of Children are very quickly alter'd, as well through the moiſtneſs of their Bodies, as by reaſon of the weakneſs of their natural Power.*

In his Comment 1. *in lib.* 6. *Epid. cap.* 1. he ſaith, that the Nerves are not Hollow: which he contradicts *in lib.* 1. *de Symptom. Cauſ.* Alſo in his book *De Diſſectione Nervorum*, and in the 8. 10. & 16. *De uſu Partium*; and his fourth book *De Locis Affectis, cap.* 1.

In his Comment on the 23. *Aph. lib.* 3. he ſaith, no man can ſtop his own breathing; which is as much as if he ſhould ſay, the work of Reſpiration is not voluntary but perpetual: which is plainly contrary to what he ſaith in his ſecond Book *De Motu Muſculorum*, where he aſſerts the work of Reſpiration to be an Act voluntary, and at the arbitration of the ſoul: For proof where-

of he produceth an Inſtance touching a Slave, who being vehemently ſtirr'd with anger, reſolved to die, and lying along on on the ground, held his Breath till he died, *&c.*

In his 1. Book *De Simpl. Med. Fac. cap.* 8. *&* 29. he ſaith, that Water doth cool and extinguiſh thirſt, becauſe of its Cold and Moiſt Nature. But he pronounceth the quite contrary Comm. 5. *in lib. De Rat. Vict. in Morb. acut. cap.* 40. where treating of Water, he ſaith it doth neither quench Thirſt, nor Moiſten. And in his Comment, *on Aph.* 13. *lib.* 4. he affirms, *that water* is, neither inwardly taken, nor outwardly applied, apt to moiſten the ſolid Parts.

In his Comment 1. *in lib. De Rat. Vict. in Morb. Acut. cap.* 22. he ſaith, that Honey'd Water, and Wine, do moiſten more than Water can: yet in *lib.* 1. *De Simpl. Med. Fac. cap.* 30. he writes, that of all moiſt things Water doth moiſten moſt, and that nothing is more moiſtning than Water.

In his third Comment on the ſame Book, *cap.* 40. he ſaith, that Water turns to Bile in ſuch perſons as have Bowels Tumefied, and that it is corrupted in a

Bilious Stomack. But *in lib. 9. Meth. Med.* he profeſſeth, that a true *Eryſipelas* ſettled in any Bowel, is not to be cured otherwiſe than by drinking cold Water. Alſo, in his Book *De Arte Cur. ad Glauc.* he adviſeth, that in very hot burning Fevers, ſuch as ariſe from yellow Bile, that the Patient ſhould drink water boldly.

In ſeveral places, and eſpecially at the end of his Book *De Opt. Sectâ*, he ſaith, a *Phlegmon* is a *preternatural Tumor with pain, not apt to be compreſſed, but hard, and hot.* Quite contrary to which he writes *in Comment. 1. in lib. 6. Epid. cap. 29.* Hard things grow hard by being dried through Cold; and that a *Phlegmon* doth not cauſe a hard Tumor, *but that it yields to compreſſion, after the manner of skins or bladders filled with water or wind.*

In *lib. 6. de Locis Affect. cap. 2.* And in Comment. *in Aph. 10. lib. 7.* and in *Comm. 2. lib. 3. Epid. cap. 6.* And in *Comment in Aph. 44. & lib. 6.* And in this third Book alſo concerning the *Natural Faculties*, he ſaith, that perſons ſeized with that Diſeaſe called the *Iliack Paſſion, do void their Ordure upwards by vomit.* Which directly thwarts what he ſaith in his Comment on *Aph. 12. lib. 4.* where he declars, *that*

nothing

nothing contained in the guts can be voided by vomiting.

A man might proceed a great way further at this Rate, if it were worth the while; but this is enough to tire the Reader, and (I think) to inſtruct any man, that neither he nor *Hippocrates* are much to be relied on in the practiſe of Phyſick. And if I ever have a more fit occaſion hereafter, I ſhall be more copious: But here now I intend brevity, and give only a Taſte, to excite ingenious men to a more ſtrict enquiry, and a ſhaking off that yoak of bondage, under which we have been detained in a ſuperſtitious adoration of poor Heathens, for ſo many Ages. And yet not ſo, as to caſt them off wholy; for there is uſe of them in a degree, and of their Commentators, as there is of old Poſts and Stones, though it be but to ſhew where the old Road was, and how we may betake our ſelves to better waies, by comparing it with the new.

V. The next thing to be brought under examination is *Phlebotomy* or *Blood-letting*: a thing very much practiſed, but how agreeable the Courſe is in theſe North-parts of the world, I ſhall Diſcuſs by and by: In the mean while know,

I do not reject it where there is urgent Cauſe; but tis ſo ſeldom that there is a tolerable cauſe for it in our Climate, that I cannot but admire at the boldneſs of many Phyſicians, who make it (as I have often ſaid) like *the Prologue to the Play*, a matter of Courſe and Cuſtom in moſt Caſes that come before them; though truly, in moſt Caſes, nothing can be of worſe conſequence to the Body.

In order to the more handſom Diſcuſſion of this ſo important a Point, give me leave to ſet down certain Particulars, as *Prolegomena*, i. e. preliminary and introductory to the Diſcourſe.

1. We ſhall take for granted, becauſe it hath been abundantly proved, that the Diſeaſe called the *Scurvy* or rather a Scorbutick ſtate of Body is more or leſs to be conſidered, as befalling men generally in theſe Northern Nations. If ſo, then it is to be conſidered alſo, what kind of bloud uſually flows in the Veins of perſons Scorbutically diſpoſed: And here, in this matter, let me uſe the Authority of that grave Collector *Sennertus*, who in his Tract concerning the *Scurvy* * ſaith, the Bloud of perſons touched with a Scorbutick Tincture becomes of the nature of

* *cap.* 2.

Vine-

Vinegar, and ſuch alſo is the Bloud of all Melancholick perſons, as ſay * *Hippocrates* and *Galen*, whereas in its right ſtate in ſound perſons it is compared to generous Wine; and he intimateth, that the Scorbutick humor is generated after the ſame manner as Vinegar out of Wine. And as there are many other things by him deſcribed, which as Cauſes contribute to the turning of Wine to Vinegar; ſo among the reſt he tells us, it may be done by caſting a little *Ferment*, that is *leven* or leavened bread, into it, which by degrees turns the Wine into its own acrimonious acid Nature. The ſame alſo is done, when an ill *Scorbutick Ferment* comes any way into that generous liquor the Bloud, and turns it to an acid ichorous acrimonious ſtate and condition: for a vitious Ferment, as well as crude and ſharp humors, will corrupt the Maſs of Bloud. Moreover, if by any Accident, as Heat, or otherwiſe, Wine happen to loſe its *Sulphur*, that is, its Sulphureous or Balſamick part (it being apt to evaporate) then it turns likewiſe to Vinegar: After the ſame manner alſo it fares with the Bloud when its *Balſamy Part* is evaporated by Fevers, immoderate Heats, Sorrows, Studies,

* Hippocr. *De V. R. Rat. in Morb. ac* T. 38. Galen, 3. *De Symp. Cauſ. ca.* 2.

Watchings, Exerciſes, or Venery, the corroſive Salty parts left behind predominate, and ſo pervert the Maſs into ſuch a ſharp condition, that it can be compared to nothing more fitly than to Vinegar.

As a further confirmation of this, take in alſo the Judgment of another grave Author, *Greg. Horſtius*, who ſhews likewiſe, what the ſtate of the bloud is in *Scorbutick perſons*; and firſt he ſpeaks * as a *Galeniſt*, and ſaith, *their blood is crude and Ichorous, apt to taint and corrupt all the Alimentary Juice which is daily added to it*, and turn it into its own ſoure vitious Nature. After this again, he ſpeaks much to the purpoſe as a *Chymiſt*, and ſaith, that the blood becomes thus Crude and Ichorous, and Nature is not able in Scorbutick diſpoſitions to reſtore it, to its Balſamick ſtate, *becauſe of an impure Tartar, endued with Vitriolate and Aluminous qualities, diluted and united with the Maſs of bloud:* which turns it into an acid ſtate.

* De Morb. Contag. lib. 7. Sect. 1. Sect. 10. & 11.

This acid ſtate of the blood, as to the manner of its generation, is very well illuſtrated by our learned Countriman Doctor *Willis*, in ſeveral places of his Book *De Ferment. & Febr.* And, which is as con-

considerable to our purpose, he sets forth also the manner of its degenerating into a *vapid* flat state, like Wine or Vinegar that is corrupted and become flat or dead; which I shall take in also by and by, because upon both these considerations I ground divers of my following Arguments. This man, in his Book concerning *Fevers*, *Chap.* 1. *&* 6. agreeth with *Sennertus*, that in Scorbutick persons the bloud is acid, even as it is in persons *Hypochondriacal*, or that are seized with a *Quartan*, wherein he saith that the liquor of the Bloud *in naturam Ponticam & acidiusculam degenerat*, degenerates into a sour austere acid nature. And a little before he describes it thus, *Sanguinis liquor à naturâ dulci, spirituosâ, & balsamicâ, in acidam & nonnihil austeram, instar vini acescentis, transit, i. e.* the liquor of the Bloud passeth from *a sweet, Spirituous and balsamick Nature*, into an *acid* and somewhat *austere*, like Wine degenerating into Vinegar.

2. In the second place, I would have this agreed on also; that the main cause of this acid state of the Bloud is an abatement, or a decay of its *Sulphur and Spirit*: This appears by * *Sennertus*, who saith, that

* *ubi supra.*

that generous liquor, Wine, is wont to become acid, when that principle the *Sulphur* is for the moſt part gone from the *Salt*, either by evaporation or otherwiſe, and ſo that principle the *Salt* which before was Volatile, and friendly, becomes fixt, and acrimonious or acid: which is the true cauſe of Vinegar: which appears plain enough by putting flame to Vinegar, for, it will not burn, becauſe the Sulphur is abſent, and the Winy Spirit extinct, or depreſſed. This is ſeconded by the aforementioned Doctor, * who ſaith, that the evaporation of the *Sulphur* and *Spirit* out of mens bloud, occaſioned through the heat of the Summer, is one reaſon why men in Autumn have that acid ſtate of bloud, which renders them lyable to *Quartan* Agues, and the *Scurvy*; which is not to be reſtored by any other means, than by dulcifying it; that is, by altering it with ſuch Medicins and Meats, as may impregnate it anew with an amicable *Volatile Salt*, and a Balſamick Sulphur and Spirit: Juſt ſo as Wines, when they are growing acid, or flat and vapid, are not to be reſtored any other way, than by feeding them with Fleſh, and rich Syrups, and freſh Lees, or other things that abound

* Willis *de Febr.* ca 6.

abound with a *Sulphureous* and *Spirituous* nature.

3. That as the Blood in Perſons often contracts an acid ſtate, ſo likewiſe in Scorbutick and other ill-affected bodies, it at length, after the manner of Wine, degenerates ſo far, as to grow *vapid, flat and dead,* being deveſted of its *Balſamick Sulphureous and Spirituous* part, in a further degree. This is illuſtrated alſo by the ſame induſtrious *Doctor* in his Book *De Ferment.** where he ſhews, that the more of the Spirits and Sulphur of Wine is loſt, the nearer it draws down and is impoveriſhed to a vapid condition; which is more deplorable than the former; for there, part of the Winy Spirits are remaining, though depreſſed, but here they are almoſt, or elſe quite drawn off and fled away, ſo that the Wine is with marvelous difficulty, or not at all, to be recovered: And juſt ſo it fares with man's bloud; it is, when it is once come to that vapid paſs, very rarely revived and Spirited again, but being crude and watery, by degrees deſtroys the vital heat, and the Ferments of the parts, and becomes unapt for motion or Circulation.

* Cap. 7.

4. That

4. That the Bloud many times may, after the manner of *Milk*, by ſome Cauſe or other be *coagulated*; in which Caſe the *Doctor* ſaith *, the Maſs is divided into parts, the more groſs and terreſtrial from the thinner part; by which means the bloud is not ſo well circulated in the Veſſels, but that its congeled parts (or portions of it like gelly) being apt to ſettle in the extremities of the Limbs, or to become ſtagnant in the heart, do interrupt its even Motion, or exceedingly hinder it; for the reſtauration whereof, Ebullitions greater than ordinary are raiſed in the bloud; as in the *Pleuriſie*, *peſtilent Fevers*, *ſmall Pox*, and all venemous Diſeaſes: to which Sence he ſpeaks alſo in * other places, and enumerates other Diſeaſes cauſed thereby, as the *Quinſie*, *Inflammation of the Lungs*, *Dyſenterie*, as well as maligne and peſtilent Diſeaſes. And that this *Coagulation or Congelation* befalling the bloud is no new doctrin (though ſome have ſmiled at it) may be ſeen by *Hippocrates* his Book *De Morbis* (I mean the Firſt Book, for, the other three are accounted Spurious) where you ſhall find the Notion in divers Texts; as in the 112, 129. and 145, *&c.*

* De Febr. cap. 2.

* Cap. 1. de Febr. & ca. 3. & 7.

5. That

5. That the work of Sanguification or *bloud-making* is performed by the Bloud; that is to say, the Chyle being mingled in the *Vena Cava* with the ſtream of bloud, and paſſing along with it through the heart into the Arteries becomes Bloud, and as it paſſeth afterward through all the Inſtruments or Parts, doth from the Ferment of every one receive ſomwhat that tends to its further Elaboration and perfection. For the clearing of this,* Doctor *Charlton* hath well collected the Sence of the later and beſt Anatomiſts; which is, *that the Chyle being imported into the Subclavian Veines, and from them into the* Vena Cava, *and thence immediatly diſembogued into the right Ventricle of the heart, is there converted into a liquor of a different Nature,* viz. *Bloud, by a kind of exaltation of its Nature, or an advance of thoſe natural Spirits which it containeth, into vital or more ſublimed and active ones. By this, the Liver* (he ſaith) *is depoſed from the office of Sanguification; and* Dr.* *Harvey* concludes, that *the Liver borroweth its heat and colour from the Bloud; but not the Bloud from the Liver.* And a little after, to ſet forth the manner of the Chyle's being Tinctured by Bloud into the ſame Nature and Crimſon colour,

* *Oeconom. Anim. Exercit.* 4.

* *De Gener. Anim. Exercit.* 51. *ſub finem.*

lour, he ſaith, *the Chyle makes but a ſhort ſtay in the heart, but remains conſtantly commixed with the Bleud, untill it be thereto perfectly aſſimilated. The bloud flowing in the heart, Arteries, and Veines, doth in quantity at leaſt ten times exceed the Chyle of one Meal, and in ſtrength or activity an hundred (for, what is more potent than that Spirit which enliveneth the whole Bodie; what more ſoft, gentle, and more eaſily ſuperable than Chyle?) and therefore no doubt but the Bleud doth eaſily obtain Victory over the Chyle, and over-run it with his own nature.*

* Lib. De Febr. ca. 3. To this agreeth that of Doctor *Willis* *, who ſaith, that *the Alimentary Juice* (or Chyle) *which is ſupplied out of our daily Food, comes crude; but being commixed with the Bleud, and circulated with it, is aſſimilated thereto:* Indeed, of late yeers, this Doctrin hath prevailed among the moſt learned, that the Liver is not the office of Sanguification, as was ſuppoſed, but that the work is performed by other Means, and after another manner. Of this number is *Andreas Caſalpinus, Conringius, Thomas Bartholinus, Veſalius*, and Doctor *Harvey*, with others: and tis queſtionleſs the very Truth.

Now

Now these *five Particulars* being confirmed as Preliminary, let me have leave to argue thereupon.

I. That we ought to be very wary of drawing bloud in our Climate, in regard of the universal spreading of the *Scorbutick Tincture*: For, I am perswaded, more than half of the Sick do suffer upon this Account, in these Northerly Nations; as is cleared pretty well in the foregoing part of this Book, it being an undoubted Truth, that the *Scurvy* is predominating in most of our Diseases, and consequently that we have much more of a crude *acid Serum* floating in the Mass of Bloud, than is usual in the more delicate Climates, where that Disease is but rarely found; and this, because, besides the consideration of Adventitious Causes, our blood is in its own nature much more Dilute and Serous. This you have well Discoursed by an eminent Professor of one of the Universities of *Germany*, by name *Augustinus Thoneus*, one that I find to have been in great esteem with *Greg. Horstius*, and with all the famous Physicians of that time; who having declared his own * Judgement against bleeding in the Fevers of the Northern Climates, adds to his own also the

* *Med. Observ. lib.* 1. *Obs.* 33.

the Teſtimony of *Zacutus Luſ.* in theſe words: *It cannot be amiſs here to recite what is ſaid by* Zacutus *in his* Obſervations *touching the Bloud of the* Spaniards, *and of the* Germans, *which is moſt worthy to be known and noted*, viz. *That in the bodies of* Spaniards *there abounds a bloud thick, ſucculent, and compact, ſo that if they be ſeized by a Continual Fever, they all die, unleſs there intervene a large letting out of bloud. On the contrary, the bodies of the* Germans *are filled with bloud crude, watery, and not very firm or compact. If in Fevers the bloud which is drawn from a* Spaniard *be fluid and watery, ſo that it do not thicken with ſtanding, it is an undoubted ſign, known even to Idiots, that they all die, becauſe the Fibres of the bloud are corrupt and diſſolved: But in* Germany, *not only in malignant Fevers, but even in the leſſer Diſeaſes, and ſickly perſons, the bloud, though fluid and watery, betokeneth no danger. Hereupon it comes to paſs, that the* Germans *do hardly bear bloud-letting, eſpecially if it be large, becauſe their bloud is leſs Spirituous; as is evident by experience, in regard, that if we in health be let bloud, merely for prevention of a Diſeaſe, we very often fall into grievous Faintings, even while the bloud is flowing: Much more*

then

then is it to be feared in Continual Fevers. The nature of the Italians *differs not much from the conſtitution of the* Spaniards; *and the complexion of the* French *is firy, ſo that they may have greater need of eventilation by bleeding. Wherefore, things thus ſtanding, it were* (ſaith he) *a Phyſicians beſt courſe to uſe providence and caution in this matter, and to accommodate his counſel according to the diverſity of Countries, Reaſon and Experience ſhewing him the way.*

If this be the ſtate of the bloud of the *Germans*, from whom we *Engliſh* are extracted, and who live in a Northern Clime not much different from theirs, certainly what is true in this caſe of them, muſt needs very much concern us: The bloud of us both is much alike, as to the Spirituous part, becauſe moſt of the Sick in both Countries have their ſouls even drowned in a Floud of Serous and Scorbutick humors within the Veins, whoſe acidity and acrimony ſhews, after the manner of Vinegar, that the Spirits therein contained are either very few, or very much depreſſed. I would fain know then, whether in opening Veins that contain ſo much of an *acid Serum*, and ſo little of the noble *Crimſon liquor*, it be not a great

hazard to let out ſo great a part of the *Crimſon* as appears in every Phlebotomy, becauſe in it the Vital Spirits abound, and it is as it were the balſam of the bloud, ſo that the ſubtracting of but a little muſt of neceſſity leave the reſt behind much more lyable to dilution and corruption, by reaſon of the ſuperabundance of the Serous acid Humors, and therefore the leſs able to give a Tincture and nature of bloud to the new Chyle which ſucceeds; whereupon, it not being duly aſſimilated and Sanguified, inſtead of being converted into good bloud, doth degenerate, and add to the Floud of Crudities and Acidities, to the further diſabling of the bodie at preſent, and a diſpoſing it for the future to worſe Diſeaſes, and a languiſhing life, which is worſe than Death. How many every year are ſeen upon this Account, exceedingly to ſuffer! when Phyſicians upon every ſlight Motion or Ebullition of Humors, are immediately for opening a Vein, the conſequence whereof is, for the moſt part, a diſpoſing of the Limbs to Numbedneſs, and Stiches, Aches, Prickings, Arthritick and Nephritick pains, and Agues and Fevers, debility of Stomack, and of all the Bowels, Gravel and wind-

Colick,

Colick, all manner of Hypochondriack paſſions, and the haſtning on of old Age, through the continual heaping up of Crudities, becauſe Nature, loſing much of Vital power in every opening of a Sluce (on which power the validity of all the Ferments of the Parts and Veſſels (which are the great Elaborators) the work of Concoction doth ſolely depend) is not able to give the Succeeding Chyle and Bloud its due Digeſtion and Vitality. Tis to be granted, that at the firſt, our Scorbutick Patients ſeem to come off with relief, the diminution and eventilation of the liquor by Phlebotomy, putting a ſtop to the high boyling, and ſo there follows a Pacification, and hence it is that the Phyſician ſeems to deſerve praiſe for it; but alas the relief is but fraudulent and temporary, the body pays for it afterward, being thereby expoſed to greater exaſperations and ebullitions, upon the acceſs of every extraneous Adventitious heat, and exotick irritating Spirit, when the Natural Heat and Spirits are by loſs of Bloud made weak and low: the truth of which is abundantly ſeen in the leſs Vegete, or the Valetudinary ſtate of Bodies, eſpecially if they abound with thoſe acid and acrimo-

nious Juices. What a horrid thing is it to ſee, how freely many times bloud is drawn in the beginning of Agues, Fevers, and Arthritick Diſtempers, *&c.* upon a pretence of quelling the immoderate Fermentation of the Maſs, whenas there are ſo many other waies to the Wood? but admit there were not, yet certainly handſome purgation by Specificks might be much more proper in ſuch habited Bodies; for, even this, if the Medicin be right, gives as preſent relief, and without the like hazard; it drains the ill humors, without diminiſhing the Crimſon Balſam and Vital Spirit, which departs and vaniſheth (more or leſs) upon every Section of the Veins and Eventation of the Bloud (as ſome do call it.) Methinks, as of all the *Galeniſts* I moſt admire *Fernelius*, ſo doubtleſs his determination is excellent in this Caſe *, *Venæ Sectio fortaſſe vitioſum humorem qui conſiſtit in venis, at non ſincerum evacuat, ſed Sanguine & utili humore permiſtum: Purgatio verò id ſolum quod vitioſum eſt & qualitate peccat, utili relicto, niſi fortè immoderatiùs efferatur. The opening of a Vein* (ſaith he) *doth perhaps empty that vitious humor which is in the Veins, yet not ſincere or mere, but mingled with*

* *Meth. Med. l.* 3. *cap.* 1.

with the bloud and the profitable humor: But Purgation empties that only which is vitious and offends in quality, leaving the profitable behind in the Veines, unleſs perchance it work too immoderately. To which let me add alſo, unleſs the Phyſician be deſtitute of ſuch neat Purgers as are fit for the purpoſe. Now I know, there are many Citations brought out of *Hippocrates* and *Galen* to the contrary, preferring Phlebotomy as a more ſafe remedy than Purging. To which I ſay, whatever *Hippocrates* might do in *Greece*, or *Galen* who practiſed in *Greece* and *Rome*, by way of bleeding, is no example for us, not only in regard of the difference of Climates, but in reſpect alſo of the Alteration of Time and Diſeaſes themſelves: And there is this likewiſe conſiderable in the Caſe, that *Hippocrates* was acquainted with no evacuators but *Hellebore* and ſuch like violent ſtuff; and *Galen* knew only the like, and ill-corrected *Scammoniates*, ſharp and firy, ſuch as ſet Nature upon the rack; and therefore they had ſome reaſon, practiſing in ſo delicate Climates, in a leſs Tainted Age, to preferr Bleeding as a more ſafe remedy than purging; but what is that to us in the Northern world, at this time,

where the ſtates of men and Diſeaſes, as well as Climates, are quite other things, and on whom God hath beſtowed a better Furniture of Remedies? Truly, beſides theſe reaſons, there is ſo much the leſs Cauſe to heed what *Galen* ſaith about this matter, becauſe as in many other things, ſo in this he hath the luck to be ſelf-contradictory, as all heady quarelſom ambitious Writers are wont to be; for, in his Comment on 2. *Aph.* 19. he extolls Blooding as a ſafe remedy before Purging; and on the contrary 2. *Acut.* 11. He magnifies Purgation before Bleeding: Therefore, if in thoſe Countries and Times it was a meaſuring Caſt, that he could not readily conclude which to ſide with as beſt and ſafeſt, then the preference of Purgation is to be admitted without queſtion by us now, having ſo many new meaſures of Reaſon to preponderate and invalidate the old. What a marvelous hazard then muſt we needs run by longer relying upon Galenick Doctrin, and exotick practiſes learn't abroad, and brought home by ſome pretending Doctors? who return perchance with little more than a *Diploma* and forein Twattle, to trie Concluſions upon our Countrimen by ſtrange Notions

and

and Cuſtoms, not at all agreeable to the Conſtitutions of our Bodies; eſpecially by the bold way of bleeding, which Thouſands of Familes are bound to curſe; and this Cuſtom is the more confidently owned by Travellers, becauſe beſides their Obſervations beyond-Sea, their Phantſies are heightned with old Galenick Authorities; eſpecially in Fevers and all acute Diſeaſes promiſcuouſly; For, in Fevers, and moſt Agues, bloud is drawn of courſe, becauſe * *Galen* ſaith, where any thing of *Putredo* is in Fevers, you are to *draw bloud, even to Fainting*; and the whole ſtream of Authors run a madding after him, except only * *Averroes*, the moſt judicious Author among the *Arabians*. But this manner of Practiſe will appear ſo much the more intolerable, if we go to ſenſible experiment; for, in bloud-letting, ſuppoſe that Ten ounces be drawn, you will have ſometimes 4.5. or perhaps 7. ounces of Humors, the reſidue goodbloud; now the loſs of but a little good bloud more concerns the Body as to damage, than the evacuation of the concurrent humors by Phlebotomy can advantage it, becauſe the more Cacochymy or ill juice is contained in the Veins, ſo much the

* 1. *Aph.* 23. 11. *Method* c 3 & *cap* 14. 15.

* 7 *Collig.* cap. 8.

more reaſon there is, not to part with any part of the Crimſon liquor, though never ſo ſmall, becauſe in it the Vital power is lodged to carry on the work of future Sanguification; and the Diminution of any part of it is but a diſabling of what remains behind. Now in Purgation, the Caſe is much otherwiſe; for, though *Helmont* ſay Purgatives do but corrupt the Bloud and Humors into that ſtinking ſtate, and then draw them away, yet he muſt be underſtood of thoſe *deleterious venemous Purgers* in common uſe; whereas new ones are found, and more may be found out, which will drain the Veins of their vitious humors in an amicable manner, and leave the bloud behind purified from its own impurities, and untainted with any exotick Ferment contracted from the Medicin: which work being done without ſtraining or offenſive irritation of Nature, the Fermentation or Ebullition in Acute Diſeaſes ceaſeth of its ſelf without any more ado. But if Purgation will not do, there are next to be uſed other means to pacifie, with much more effect and ſecurity than by Phlebotomy, which alwaies rids away a portion of the Sulphur, the Balſamick and Spirituous part of the bloud

bloud; which if kept within the Body, would conduce to a more quick over-ruling and pacifying of the abundance of Saline acid Humors, which are floating in the Veines of moſt perſons that are ill-habited, or Scorbutically inclined For,

2. If it be true (as I have before ſhewn) that a decay of the *Sulphur* and *Spirituous* part of any liquor, is the cauſe of its becoming crude and acid, and if thereupon alſo the Salty part become extravagant for want of the *Spirit* and *Sulphur* to reſtrain and attemper it; it is plain likewiſe in the bloud, that the Bilſamick Sulphur and Spirituous part thereof being but little, and leſs in our Northern Bodies than thoſe of other Climates, it muſt be a pernicious courſe that ſhall offer to make it leſs; for (as I have hinted already) every little part drawn away leaves the remainder in the Veins leſs able to allay or ſweeten the acrimony of thoſe acid and Saline Humors which are aſſociated therewith. This is the Cauſe, why *Fevers*, and *Agues*, in theſe parts of the world, uſually fare ill upon bleeding; for, though for ſome hours after perhaps there ſeem to be ſome abatement, yet commonly preſently the Diſeaſe becomes thereby more fierce and dif-

difficulty curable; the ſtrength Spirits and Balſam (which ſhould help to qualifie and conquer the Morbifick matter) being more abated than the Feveriſh Cauſe, or its Diſtemper.

To ſecond this neceſſary truth, give me leave to introduce the ſame learned Author, whom I mentioned before, *viz. Thonerus* the *German* Profeſſor, whoſe Judgment concerning Continual Fevers is back't with Reaſon, Experience, and good Authorities; ſo that it cannot be amiſs to cite him here at large. * *That drawing of Bloud is* (ſaith he) *dangerous, and for the moſt part deadly, is evident in Reaſon: For, whereas the Source of thoſe Fevers ſprings not from a Plethorie or Fulneſs, but from ill Juices, and that which feeds or kindles the Diſeaſe exiſts in a putrefaction and corruption of ſerous and pituitous Humors, frequently mingled with ſuch as are ichorous and bilious; if then Bloud be let, the Humors become the more unruly and confuſed, and natural ſtrength is caſt down by a reſolution of the vital Spirits, which not being ſtrong before in an ill-habited body, muſt needs be unable afterward to encounter with the Diſeaſe and conquer it.*

* *Obſerv. Med. lib* 1. *Obſ.* 33.

Add

Add moreover (ſaith he) *that the Seminary of thoſe Fevers being for the moſt part ſetled in the Meſeraick Veins and the leſſer veſſels more diſtant from the heart, it falls out thereupon, that a Vein being opened, the more laudable blood flows out firſt; afterward follows that which is much worſe, and ſo by reaſon of vacuity, to preſerve a continuation of the ſtream, the vitious humors being called away from the remoter or remoteſt parts, and brought nearer to the heart, cauſe much detriment and danger. And when there is Malignity in thoſe Fevers, they have much more need of good Cordials ſo fitted as to infringe it, and diſcuſs the* Miaſma *or Malign Inquination of blood and humors. It is witneſſed by Experience, that many perſons who have drawn blood to prevent Fevers, have by that means been ſeized thereby, ſome examples whereof you will find in my Obſervations; and* Philip Hochſtetterus *Phyſician of* Aubsburgh, *relateth in his obſervations, that he knew divers of the Nobility and Gentry, who having no Sence of any Diſeaſe likely to come on them, would needs be let blood for ſecurity, but within few daies after fell into a Fever, and died. For my own part* (ſaith he) *I have by long experience found, that many perſons ſeized by thoſe Fevers,*

vers, from whom bloud hath been drawn by advice of principal Physicians, have thereby been sent packing to their Graves, although their bodies, as to outward appearance, have seemed Sanguine and Plethorick. Thereupon, I being afraid to follow their steps, do very rarely give order for or encourage the opening of a Vein. And it hath very often been no small matter of wonder to me, that forein Physicians, both Italian, French, *and* Spanish, *are so profuse in letting bloud, in all Continual Fevers without distinction. Of late, four* Germans, *of which three were Barons, being at* Paris, *fell into a Fever, and were blouded several times, after the fashion of that place; the three Barons died, but the fourth man escaped, though less strong of constitution than the other.* So farr this grave Author; some of whose Expressions, though I approve not, yet as to the main about the fond custom of Bleeding, he speaks Reason, and his own Experience in a Climate little differing from ours.

The like also may be said concerning those Intermittent Fevers called *Agues*, for the Cure of which (especially in the *Spring*) tis a common course to Vomit, Purge, and Bleed, This (as Doctor *Willis* saith)

ſaith, is * *Curatio Dogmatica*, the common Dogmatical way of curing Tertians, *by which the Sick are miſerably tormented, and the Diſeaſe ſeldom removed, ſo that this Diſeaſe is deſervedly called* Oppobrium Medicorum, *the ſhame and Reproach of Phyſicians.* Here, though he ſeem to diſallow Vomitories and Purgatives, it muſt needs be underſtood of thoſe Medicaments which are commonly uſed by ſuch as practiſe the Dogmatical Galenick way, which uſually infect the bloud with an ill Tincture, and by irritation put it into a more fierce Fermentation, and worſe diſorder than before; but other Evacuators may be had whereby that Inconvenience is avoidable; and a little after, the ſame Doctor grants, that even by an ordinary Vomitory given a little before the Fit, the Ague is ſometimes taken away. But that which makes againſt Bloud-letting is, that he ſaith there, that the Cauſe of Tertians is *an ill diſpoſition of bloud, acrimonious, and bilious, ſo that it doth not rightly tranſmute and aſſimilate the new Chyle or Nutrimental Juice which is continually ſupplied, ſo as to make good bloud of it, but turns it into an ill Fermentative matter:* From whence I argue, that if the ſtate of the bloud be

* De Febr. cap. 3.

ubi ſuprà.

acri-

acrimonius, and (as he calls it) *bilious*, that is to say saturated with *an adust degenerated Sulphur*, as well as *a sharp acidity* (as it usually is in all Agues, but remarkably in *Tertians*) certainly in the drawing forth of such bloud out of the Veins, the loss of the Balsamick genuine *Sulphur* and *Spirit* contained therein, which alwaies issueth out mixt with the other liquors, must needs be very mischievous, because the remaining liquors become the more prevalent within the Veins, and turn the succeeding Aliment for the most part into their own vitious Nature, instead of Bloud: So that tis no wonder, if every thing grows worse with a Tertian Ague after Phlebotomy. And if this be true touching *Tertians*, then the Reason holds *a Fortiori* touching the other sorts of Agues, because the rest are more commonly attended with a Bloud much more vitious, either crude, acid, or acrimonious. Hence it is, that the usual consequence of opening a Vein is, that the state of the bloud growing more degenerous, through the loss of its *Sulphur* and *Spirit*, is changed from its active, spirituous, sweet, balsamick condition, either into a flat and vapid, or else into an acid austere condition;

and

and ſo for theſe three years paſt, I have obſerved, eſpecially in bodies Scorbutically inclined, that Tertians in the Spring, after Bleeding, and other Dogmatical Dotages about Cure, have in a ſhort time been converted into *Quotidians*, and before Autumn into *Quartans*: others have become *Double-Tertians*; and in time wearing away the body after the faſhion of a *ſlow continual Fever*, have made it become *Hectick*, and waſted it to an incurable *Maraſmus*. And thoſe robuſt bodies that eſcape beſt, though the errors of Curation have not been able to ſink them, yet uſually they come off with a habit of body much impaired, being (moſt of them) all their daies after lyable to Dropſie, Gout, unwieldineſs of body, Scurvy, Hypochondriack Melancholy, ill Concoctions, Obſtructions, and all thoſe Chronick Diſeaſes that are the Concomitants, or Conſequents, of Crudity and Acidity; among which are various Arthritical pains, pains of the Loynes, Gravel, Stone, Scrophulous Tumors, Leprous, Scabby, Itchy, and Ulcerous Diſpoſitions. And as theſe great Miſchiefs the bodies of men remain lyable to, after Bleeding, and other irrational Means and Scholaſtick Methods of hand-

handling Agues; ſo the uſual practiſe of Bleeding, upon pretence of Curing any of thoſe Chronick Diſeaſes before-mentioned, which proceed from a crude, ichorous, acid, acrimonious qualification of bloud, though it ſeem to cure at preſent, yet the truce given by the Diſeaſe is but like *Fides Punica*, very treacherous, becauſe the Crimſon balſamick liquor having loſt part of its *Sulphur* and *Spirit*, hath leſs of a Vital Sanguifying power than it had before, and ſo every addition of Nutriment ſerves but to advance the Heap of Crudities and Acidities, and the Saltiſh principle, grown exorbitant for want of the native Spirit and Sulphur to reſtrain it, is exalted to a condition much more corroſive, and deſtructive: So that upon the leaſt Accident, either by Change of weather, ill Diet, *&c.* or a Turn of the Seaſons of the year, the palliated Diſeaſes, return with more ſeverity than before; and yet after this, I have ſeen men ſo mad as to attempt a cure again by Bleeding, which procures perhaps a new Palliation, till after many Repetitions of the ſame wicked Courſe, the habit of the Body and the ſtate of the bloud becomes ſo depauperated, that its Vital principle being exhauſted,

hauſted, there remains no more room for the like palliatory proceeding. Which leads me to a diſquiſition upon the third *Preliminary Point*; and that is the *vapid, flat, inſipid, dead ſtate of the Bloud.*

3. Now if there be ſuch a flat, vapid, Spiritleſs ſtate of Bloud (as we ſuppoſe, may be) that is to ſay, not abſolutely ſuch, but in an analogical Comparative Sence, (for, ſo it may be ſaid to be, if compared with that florid Vegete vigorous condition which ought to be;) then ſurely it will be yielded, that in ſuch a Caſe, *letting bloud* muſt needs be exceeding pernicious: For, the leſs of the nobler vital bloud is in the Maſs, the more miſchievous it is to part with any part of that little, foraſmuch as in all openings of Veins a conſiderable proportion of the Crimſon liquor comes along with the other, and leaves the remaining Maſs the more Spiritleſs and deſtitute. In any liquor, as the loſs of the *Sulphur*, and a depreſſion of the *Spirits*, cauſeth it grow acid and acrimonious; ſo a diminution, evaporation, deſtitution or deprivation of Spirits, cauſeth it to grow vapid, or (as we call it in Engliſh) *flat and dead.* This holds true likewiſe in the Liquor of the Veines: It may be concluded therefore, that when

it is brought to such a Pass, or in any persons that lead a Course of life which must of necessity bring it to that pass, we ought to be very careful to avoid the breathing of a Vein (as they call it) or rather the breathing out of the Spirituous liquor, which is that which gives life and vigor to the whole Mass, so farr as it is capable thereof.

The persons usually reduced to such a Pass as this are these,

Such Scorbutick persons, and the *Pocky*, as have much of those Ferments either Hereditary, or else long setled and inveterated within them through ill Diet, or by ways of Contagion *Mediate* or *Immediate* long contracted; for, nothing eclypseth the luminous Ethereal Vital Spirit, and by that means depauperates the bloud more than the poysonous Ferments of these Master-Maladies; and this is visible enough in those so Tainted, that have not by nature so strong a constitution of Body to resist the operative power and influence of the same Ferments, as some other Tainted persons have; for, in the weighing of all these Reasons you are to add *a grain of Salt*, that is, you are to give some allowance, according to the condition of the Patients; but be it what it will, Bleeding doth

doth alwaies bring detriment; and by frequent repetition of it, the Venom lodged in the other parts of the Maſs gains the greater opportunity to ſhew it ſelf, and by ſuch errors, it at length acquires a Dominion, even in the ſtrongeſt perſons, over the whole habit of the Body; and then they are reduced to the ſame viſible Inconveniences and damages, which are wont to enſue the bleeding of thoſe other Tainted perſons that are by nature of a more weakly Frame. But the ſum of this Buſineſs is, that in theſe Caſes, where any thing of thoſe Contagious or Venemous Ferments lurks, Bleeding doth hurt more or leſs, though ſenſibly and preſently in ſome more than in others; and this I obſerve, that when perſons Tainted are ſeized with quick Agues, or Fevers, or other acute Diſeaſes, which ever bring the ſtrongeſt Conſtitutions down to a weakly ſtate, the drawing of bloud draws a miſerable Train of Conſequents after it. Which hath brought me to this Reſolution, and I hope it will work upon others, ſeeing the *Venereous*, and *Scorbutick* Ferments are grown ſo univerſal, never to open a Vein but when there is a very great urgency, or elſe a neceſſity for immediate ſaving of a

life, or upon ſome other extraordinary occaſions; which are apprehended well enough by judicious Phyſicians, and it is not proper to my deſigne, who affect brevity, here to recite them, and who have taken upon me, only to diſcover the vanity of compriſing Phlebotomy within the compaſs of a common Formal Method, as it was of old, in order to the curation of moſt Diſeaſes; whenas all Conſtitutions of men and Diſeaſes in this Age do (as I have pretty well manifeſted) participate more or leſs of the aforementioned *Ferments*, and their Blouds are by the *Fermental Venoms* contained in them, more or leſs vapid, diſ-ſpirited and impoveriſhed, or apt to be ſo upon any ſmall Accident that way tending.

Next to the perſons Scorbutically and Venereouſly Tainted, I may reckon thoſe that are immoderate in the exerciſe of Simple Venery; for, exceſs this way wonderfully exhauſteth the Spirits, and carries away as it were the Flower, and moſt balſamick part of the Alimentary Juice, to the defrauding of the Maſs of bloud of its nobleſt ſupply; ſo that it ſoon grows acid and acrimonious, and by degrees Spiritleſs, Vapid, and Inſipid. Such perſons

as

as theſe are very lyable to Fevers; and if they happen to be ſeized therewith, or any other Diſeaſe, the opening of a Veine brings ſuch damage as is ſcarce to be repaired.

It is to be obſerved likewiſe, that perſons given to exceſs of Wine, or ſtrong Waters, or other Tiplings, do in tract of time loſe the noble native Heat of the body, and the Spirituous Balſamick part of the bloud comes to evaporate and ſpend it Self, by being infeſted with an extraneous preternatural Heat, and with Crudities; and ſo the Maſs becomes as vapid by this way of intemperance as any other.

The like may be ſaid concerning people of *a ſorrowful Frame of Heart*, or that are broken in their Fortunes, who are uſually ſick in mind rather then Body, and the mind diſorders the body. Be their Diſeaſe what it will, I never ſaw them proſper with bleeding; or with the other Evacuations upward, or downward, if violent, or frequent.

To theſe add alſo perſons who are of little or no appetite to Feeding, or that have an ill Concoction; for, their liquor within the Veines muſt needs be very live-

leſs, crude and vapid, ſeeing the Chyle comes to them imperfectly cocted; This is very well noted alſo by Doctor *Willis* *, who ſaith, that in men ſeemingly ſound, after the more plentiful feeding and playing the gluttons, perpetual Tiplings and large drinking Bouts, too great a quantity of *Serum* or juice is infuſed into the Bloud, *ſo that its whole Maſs being too much diluted with crude Humor, becomes more watery, and the leſs Spirituous; by which means men are rendred ſluggiſh, and unapt for motion or exerciſe.* But none have a more defective ſtate of bloud, than thoſe that are worn and waſted by a long courſe of *abſtinence, hard labors, and Studies, Faſtings, and Watchings*; For, the ſame *Doctor* well ſaith, that in ſuch Caſes as theſe, *the vital Spirit being very much evaporated, the Maſs of bloud doth begin as it were to grow vapid,* flat or dead. He ſaith alſo, * *that Diſeaſes many times induce ſuch a Diſpoſition of bloud habitually; as do the Scurvy, Jaundies, ill habit of Body, long Fevers and Agues, and the greateſt part of Chronick Diſeaſes; in which the whole Maſs of bloud, paſſeth from a Spirituous nature into a ſharp, acid, or auſtere.*—Now in all theſe Caſes and Conſtitutions, to venture upon drawing

* De Febr. cap. 1.

* ubi ſupra.

ing of bloud, unleſs in caſe of extreme neceſſity, is a thing ſo contrary to reaſon, as, not to be anſwered before God or man, ſeeing that after the detracting of any portion from the Maſs, the florid vivacious part which comes forth, though never ſo little, is not to be made up again, where there is a redundance of crude, watery, Spiritleſs liquor in the Veines, to drown and pervert all the ſucceeding Alimentary Juice, that ſhould be made uſe of and improved towards the reparation of the loſs.

4. Moreover, if there be at other times ſuch a ſtate of the bloud, as that which *Hippocrates* of old, and Doctor *Willis* of late, calls *coagulated* and *congeled*, certainly wherever this ſtate of bloud is found, the reaſon holds very ſtrong here likewiſe againſt the opening of a Veine. Now doubtleſs, in all thoſe *Scorbutick Diſpoſitions* which proceed from a *fixed Salt*, it is obvious enough, that the bloud not having the *Spirit*, and *native Sulphur*, ſufficient to attemper and exalt the *Saline principle* to its due ſtate, it doth by its coagulating nature render the Maſs of Bloud the more thick, and unapt for Circulation; and in this Caſe, it being in reaſon

to be ſuppoſed, that the Circulation which is, is performed by the moſt Spirituous and nobleſt part of the Maſs, what can be ſaid but that when a Veine is opened, the noble and more ſprightly Juice is let forth, and the vitious left behind, to do miſchief ſevenfold more than ever it could do before?

Nor is it thus hazardous only in the common Chronick *Scorbutick Diſpoſitions*; for, *Coagulations* of ſome parts of the Maſs of bloud do happen upon many other Accounts alſo of *Acute Diſeaſes*, particularly in *Continual Fevers*. And very pertinent to our purpoſe, for the explanation of this particular, is that other place of the ſame learned *Doctor*, where he ſaith, that the bloud, after the manner of Milk, is ſubject to many mutations within the Veines, and among the reſt, to be *coagulated, congeled or curdled*, by the acceſſion of acid Humors, and the like, that have a power to ſeparate and curdle ſome part of the Maſs. His words are theſe; * *as upon the opening of a Veine, the Bloud that is drawn forth, doth by a ſpontaneous Coagulation, and ſeparation of the parts from each other, imitate the various ſubſtances of Curded or Turnd Milk; ſo ſometimes while*

* *ubi ſupra, circa finem.*

it

it is contained within the Veines and Arteries, it undergoes juſt ſuch another mutation by Morbifick Cauſes, as Milk doth when it is imbued with the Runnet; by which means the bloud being Clogged or Hindred in its circulation, or in ſome places congeled and ſetled by parcels, produceth manifold Diſtempers; among which, he reckons alſo *Maligne and Peſtilential Fevers.* And to this alſo may be aſcribed many Diſtempers of the *Heart*, and *Lungs*, while ſo ill-conditioned a Bloud paſſeth through them in its circuit, and beſides an ill Tincture, leaves behind it ſome curdled portions, or elſe congeled Clodders, ſometimes to the ſuffocating, but often to the obſeſſing and diſtreſſing of thoſe two moſt noble Vital Inſtruments of the Body. To the like purpoſe he ſpeaks very well alſo toward the latter end of his *ſecond Chapter*, which I have mentioned alſo before, *Sometimes* (ſaith he) *there happens a preternatural manner of effervescency or Ebullition of Bloud, which induceth ſuch an Alteration of it as befalls Milk; that is to ſay, ſometimes there is induced a coagulation of that Crimſon liquor by a Morbifick Cauſe, ſo that its ſubſtance being turn'd, ſeparateth it Self into parts, and a ſecretion is made of the groſs*

and

and earthy part from the thin: by which means the bloud is not ſo readily circulated in the Veſſels, but that portions of it like gelly, will be ſtagnant and clogging in the way, to the cauſation of divers Maligne and peſtilent Diſtempers.

In his ſeventh Chapter, he ſaith the ſame, that *è Miaſmate venenato Sanguinem inficiente, ejúſque liquorem congelante, Febres Malignæ dependent*, from a venemous *Miaſma* or Inquination infecting the bloud, and congeling its liquor, Malignant Fevers do depend. And in his fourteenth Chapter, which treats particularly of *Maligne Feavers*, he ſaith, *that the Maligne Ferment cauſeth a coagulation of the bloud by parts, which congeled portions cauſe a* Necroſis *or inward Mortification, with a* Syncope *or dejection of Spirits.* Which he repeats again in his 15. Chapter touching the *ſmall Pox* and the *Meaſels*; and a little afterwards ſaith, that *the bloud being Tainted with the Ferment of the ſmall Pox is apt to coagulate; and that the prime Intention in curing them is, that the motion of the bloud ſhould be preſerved from Stagnancy, and that the congeled or gellied venemous portions of it be driven out toward the skin*; in which reſpect I cannot but wonder that

ſo

ſo learned a man, after he hath ſaid thus much, ſhould allow bleeding, if there be a *Plethorie*, as he doth expreſs himſelf in the ſame place; whereas reaſon muſt needs hold very ſtrong againſt it, becauſe if there be in the *ſmall Pox* and *Meaſels* (as he ſaith) a venemous or Malignant *Miaſma*, and an aptneſs in the bloud to coagulate, and if the venom cannot be drawn away by bleeding in any Malignant Diſeaſe (as he ſignifies ſufficiently in the foregoing Chapters) nor the congeled portions of the Maſs of bloud be let forth (which in other places he grants;) I ſay if theſe things be ſo, I would fain know then, whether that which is emitted from the Vein be not *purior pars Sanguinis*, the moſt florid Vital part of the bloud, and whether it being drained out of the Body, it be not in reaſon to be expected afterward, that Nature being debilitated by its loſs, the venom having leſs of good juice within the Veines to controll it, muſt needs grow the more tyrannous, and the gelliedportions become the leſs conquerable, and the circulatory motion much more ſlow, and leſs equal, when that vital and more ſprightly juice which ſhould ſubdue, and quicken them to motion, and drive them

them forth toward the Skin, is ſeparated from them? In ſuch caſe, certainly a pretence of *Plethorie* is not paſſable, becauſe *Plethorie* properly is but a *Simple Fulneſs*; but in theſe Diſeaſes, the moſt cogent Indications are to be taken from the Malignity or venenoſity of the *Miaſma*, and from the obſtinacy of the matter; that is to ſay, of thoſe congeled or gellied portions, which exaſperate Nature, and hinder the purification of the Maſs, and deprive it of its regular equal Motion throughout the Body. Therefore I ſuppoſe at this time, the worthy Doctor (who I perceive is not very fond of Bleeding) might be carried aſide a little with the ſtream of Practiſers; whoſe common *Hypotheſis* hath been heretofore, *that Nature being by Bleeding eaſed of part of the burden of Morbifick matter, is by that means the more inabled to deal with the Remainder*: But as in theſe Malignant Diſeaſes, Bleeding carries not away the Malignity; ſo where the offending matter within the Veins is grown grumous, curdled, or gellied, tis not to be imagined that the Prick of a Lancet can let it forth, but it will make way rather for a loſs of the fluid and more lively part.

No

No marvel therefore, that we in theſe North parts of the world, whoſe Blouds are more naturally abounding with crude, ſerous, acrimonious Humors, and conſequently more inclinable to ~~theſe~~ *Coagulations*, do by experience find it ſo exceedingly deſtructive to draw bloud in Fevers (which are moſt of them Malignant) and in many other Diſeaſes (there being Malignancy and acidity almoſt in all). And for Fevers, 'tis intolerable to ſee how cuſtomary this courſe continues among us, it being a matter of cou ſe, inſomuch that if a Patient die which hath not bled for a Fever, many of the better ſort, taken with Forein Faſhions, are apt to think it is for want of Bleeding. Tis not to be denied but caſes extraordinary may happen to indicate it neceſſary, but then it ſhould be admitted only upon ſuch occaſions, and not practiſed as a matter of courſe in our Climate: And the more ſuſpicion there is of any Maligity, the more it is to be avoided.

Hear therefore what our grave *German* Author *Thonerus* ſaith further about this matter. And it is not by vertue of his own opinion only, that he was againſt the opening of a Veine in his Climate, which is of ſo near a nature to ours; but he brings

* Thonerus, *observ. Med. ubi supra.*

* brings in the Suffrages of other moſt eminent *German* Phyſicians, as *Joannes Agricola* an excellent Chymiſt and Practitioner, who in his Book entituled *Parva Chirurgia*, ſaith, that *letting of Blood in a Malignant Fever is deadly, eſpecially if it be delayed twenty four hours after the firſt ſeiſure made by the Diſeaſe; and that he had obſerved above a hundred deſtroyed by Bleeding.* To him agreeth alſo that famous Practitioner *Rulandus*, who plainly profeſſeth, that he alwaies found it pernicious, *and that though the Veines have been opened at the very firſt, yet the Fevers were thereby the more exaſperated, and the more grievous Symptoms followed; for,* (ſaith he) *the Feveriſh* Fomes *doth not conſiſt in a* Plethorie, *but in a* Cacochymie. Add to this alſo the learned Italian *Fracaſtorius* *, who ſaith, that when thoſe Malignant *Fevers which ſhewed themſelves with ſpots, began firſt to ſpread in* Italy, the Phyſicians purſued the old courſe of Bleeding, *and though they began the cure with it, yet they all died that had a Vein opened.* And if the Courſe proved ſo deſtructive even in *Italy*, in a Diſeaſe that had Malignancy in it, what ſhall we think then of it in our Climate, and in this Age, where not only Fevers,

* *Lib. De Morb. Contag.*

but

but moſt other Diſeaſes have a Malignant and Contagious Ferment rooted in them?

And notwithſtanding what ſlip'd before, I find Doctor *Willis* alſo (who hath had the honor of opening the eyes of the world, more than any before him, about the nature of Fevers) very poſitive againſt Bleeding: For in his ninth *Chapter* he ſaith, it is found by obſervation, *that frequent letting of Blood renders men more apt to Fevers, wherefore it is commonly ſaid, that thoſe who once let blood are inclined to a Fever, unleſs they do the ſame every year.* And in his fourteenth Chapter, that where Malignity is, there, upon evacuation by Catharticks, or by Bleeding, *Malignitas plerúmque augetur*, it is for the moſt part encreaſed, and, if not heeded, *more largely diffuſeth its venom.* And how can it be otherwiſe? ſeeing the Cauſe of the Diſeaſe is many times ſo ſeated, that a ſtrong Purge will not eaſily reach the place, much leſs will Bleeding be a means to evacuate any thing from thence: For, the Doctor and the beſt part of Authors do determine, that Maligne Fevers for the moſt part * *are ſeated in the Animal Spirits, or in that Spirituous ſubtile liquor which is abounding in the Brain, the Nerves, and all the*

* Chap. 12.

the Nervous parts; and their venom takes impreſſion the more profoundly, if the Patients have been oppreſſed *either with Fears, or Griefs*: Theſe things the Doctor takes notice of as a great matter in the producing and qualification of thoſe Fevers: To which give me leave to add my own obſervation; that I never ſaw any perſon ſo oppreſſed, that hath been ſeized with any Fever, but the Diſeaſe grew worſe after Bloud-letting, and the Cure much more difficult; but in *Maligne Fevers* all things have proved ſo bad after it, that very few have eſcaped, but have immediately viſibly drawn on toward Deſtruction. And the like may be ſaid of perſons that have been much delighted with, or debilitated by *venereous exerciſes*, *Watchings*, hard *Studies*, &c. or any Courſe of life that brings on a diſſipation and poverty of Spirit, though otherwiſe their habit of body may ſeem never ſo Plethorick, fleſhy, or Sanguine.——But to return to the main; if it be ſo in Fevers of a Maligne Nature, that the *labes* of their venom uſually lurks in the Animal Spirits, and in the Spirituous liquor wherewith the Nerves and Nervous parts are irrigated and ſtored; and ſeeing it is in the

nature

nature of every Venom and Contagion whatſoever that befalls the Body, to take the courſe toward the Brain, and the Nervous parts and liquors, and there ſeat themſelves, as is evident in all *Pocky* and *Scorbutick* Malignities, I would fain know which way Bleeding, which drains onely the Venal Bloud, ſhould be of uſe to relieve a Diſeaſe ſeated in ſo abſtruſe and remote paſſages as the Nerves; and what the evacuation of bloud can contribute to the amending of a default contained in a nobler and more Spirituous liquor; and whether it be not a dangerous miſtake, to aim at an eventilation and an allaying of ebullitions and Fervors of bloud, when the Fever is cauſed and continued by an effervescence and exagitation of the other Liquor aforeſaid; and what a madneſs it is, in ſuch Fevers to conſider a putredinous ſtate in the *Humors of the Maſs of bloud*, whenas the Diſeaſe mainly conſiſts in *Spirit*? Moreover, ſeeing the *Pocky*, and *Scorbutick Ferments* are ſo rife and general in this Age, that they get more or leſs into all Diſeaſes, and induce a Malignity in them (as hath been already ſhewn) it is worthy the care and ſtudy of Phyſicians to conſider, whether *Fevers in general* have

not a Touch of Malignity in our Age, upon that account, as (I have shewn you) *Helmont* doth wisely determine; and consequently whether in our daies, Fevers by the direction of those *Maligne* and *Contagious Fermenss*, have not changed their usual Quarters in the Veins, Arteries, and Bowels, and taken up new ones in the *Nervosum genus*, the Brain and Nervous parts; and so whether the main battel in contending against them ought not to be maintained by *Alexipharmacal Remedies*, others than those in common use, and such as are more appropriate to the Nature of those Fermental Venoms, rather than by Bleeding and other evacuations? He who observes in these daies, almost in every Fever, yea and in Agues, what little Spasms, Vellications, Convulsive Motions, Tremblings, Stupors, Rigors, Torpors, drowsie and delirious Symptoms, and the like distempers incident to the Nervous parts, are attending, and much more frequently than in former time, will easily grant, that Fevers do for the most part settle in the liquor of the Brain, and of its Nervous Appendants; and so that Bloud-letting, serving only to debilitate persons, because it cannot reach the offend-

offending Cauſe, muſt needs be out of Doors, together with the ordinary languid Julips and Cordials of the Shops. To ſay no more of this, I have been very much confirmed in my Judgement, by obſerving the Practiſe of one who is no Academian, but an antient Practiſer, of a good Inſight into Nature, and exceeding dextrous and Succeſsful in curing Fevers (a grand multitude daily flocking to him) and yet he draws no blood, and very ſeldom uſeth other evacuation than by breathing Sweats, procured by the uſe of Alexipharmacal means, ſuch as oppoſe Malignity, and by diſſolving, or diſcuſſing the coagulated or gellied portions of the Maſs of blood, do reſtore the blood into a due courſe of Circulation, and preſerve it ſo, till the Malignity be ſubdued, and diſſipated *per Diaphoreſin*, that is to ſay in *Engliſh*, by a breathing forth or tranſpiration through the Skin. And what is ſaid here againſt Blooding in Fevers, *&c.* is by a parity of Reaſon applicable to divers other Acute Diſeaſes; yea and much more to thoſe that are *Chronical*, ſeeing the *Coagulations* and *Congelations* here deſcribed are moſt frequent in them, by reaſon of the acrimonious Crudities and

Acidities which in these daies are in Vogue among them. Nevertheless, where Customary evacuations of bloud by *Menstruals*, *Hæmorrhoids*, and the like, are suppressed; or if Patients have been often used to Bloud-letting for their Distempers, somewhat may, in such cases, be indulged to necessity and custom, but not without the good consideration and care of a wise wary Physician.

5. If it be true, which the most learned and industrious Inquirers of this Age do now hold, that in the work of Sanguification, it is the Bloud which makes Bloud; *viz.* that the power of converting the Chyle or Alimentary Juice into new Bloud, depends upon the goodness and the validity of the old Mass, which is supposed to give it the true Tincture and Transmutation, then the drawing forth of the *Crimson liquor* in all the Cases before-mentioned, wherein either the Spirits are decayed, or the Mass is vitiated, doth but disable Nature from making a new supply, as I have before endeavored to illustrate; and so thereupon ariseth a just exception in innumerable Cases against Bloud-letting. Therefore it will be very much to the purpose also, here to cite

what

what is delivered by the ſame Doctor in ſeveral places, to ſhew, that ſuch a ſtate of Blood is prevalent in the cauſation of moſt Fevers, and thereupon to argue againſt Bleeding in that caſe. In his firſt Chapter * he ſaith thus: *If the ſupply of the Alimentary Juice be not congenerous with the bloud, nor aſſimilated to it, but, by reaſon of a defect of coction, is wholy dilated into a crude humor,* it is a principal cauſe of perverting the Maſs, and rendring it *ſometimes wateriſh and cold, ſometimes ſharp or Salt, and ſometimes acid, auſtere, and degenerated from its natural ſtate after one manner or another, and becomes lyable to be ſtagnant,* i. e. *defective in motion, or ſubject to Feveriſh Ebullitions, and is a cauſe of Paroxyſms or Fits in Agues and Fevers.* This he confirms alſo in his *third Chapter*, ſaying, that *the Effervescence of bloud in Agues, which conſtitutes the Fit, depends only upon the non aſſimilation of the Alimentary Juice to the Bloud; and that the ſaid Juice daily ſupplied out of our daily Food, not being duly digeſted and Sanguified by mixtion with the old Maſs, doth degenerate into watery crude humor, which Nature not being able to ſubdue, is provoked to that Feveriſh diſturbance, which we call a Fit;*

* De F. br.

and the Returns of it are not taken off, till the offending Juice be removed out of the Body. To this Sence is much of that Chapter, and he repeats it in his *sixth Chapter* when he comes to treat of *Quartan Agues*; which may be applied also to most other Agues, because though they have another Type and Formality, yet they have much of the Nature of a *Quartan*, by reason of the Scorbutick Acidities predominant in them more than heretofore, and that is the main reason why they are all become as difficult to be cured now, as *Quartans* were of old; so that drawing of Bloud and other Evacuations are as little to be allowed in them, as in the Quartans; wherein the learned Doctor saith, *Evacuators do not procure one jot of advantage, but rather by depauperating the Bloud, destroy the strength*; whereas the right way to cure is, to reduce the Mass from its crude acid state, by such remedies as will *new spirit the bloud, and volatilize it.*

In a word, there is this to be said touching the different effects of Bleeding betwixt the Northern and the finer parts of the world; They bear it much better, because their bloud is endued naturally with

with a greater plenty of Spirits, than ours, and hath leſs of that *Seroſa Colluvies* with which the Northern men do abound; ſo that in the more delicate Countries when Bloud is drawn, thoſe Spirits which are loſt thereby are, becauſe of their plenty, better ſpared, and ſooner repaired; partly by the benignity of the Native Air, and partly (yea eſpecially) by the notable power of *Aſſimilation* which is in their Bloud, much beyond others; which quickly ſupplies them with Bloud again, becauſe there is not in their Veins ſuch a Floud of acid and vapid Seroſities to drown and pervert the new Chyle, ſo as thereby to hinder the work of Aſſimilating it to the ſtock of Bloud which remains behind; and therefore it is, that as they bear the loſs better, in regard of a greater ſtore of Spirits, ſo the reparation of the ſtock of Bloud and Spirits is much quicker, in regard of the more ſure and ſpeedy diſpatch of Sanguification. Now in the *Northern Climates*, eſpecially in a cloudy dripping Iſland, as ours is, where the Air is not ſo impregnated with clear luminous Ethereal and Spirituous Atoms, as theirs is, and conſequently not ſo near of kin to the Spirit of man; as it cannot be ex-

pected here ſhould be ſo great a plenty of Spirits in our bloud; ſo likewiſe it is but reaſonable (which is obſerved by Writers) that our Maſs of bloud ſhould be floated with a greater quantity of Crude Seroſities, and conſequently that we ſhould be not ſo able to bear Bleeding, becauſe of the paucity of Spirits; nor ſo likely to repair what Bloud is loſt, becauſe the Remainder hath leſs power to aſſimilate and Sanguifie the ſucceeding Alimentary Juice or Chyle. So that conſider the different ſtate of the generality of men in the various Climates and Countries, and we ſee there is reaſon why they ſhould generally approve Bleeding, and be relieved; and why we ſhould have a general Averſation to it, ſo as not to permit the practiſe of it to be ſo general and cuſtomary, as in more delicate Airs and Countries, when we daily ſee it ſo deſtructive in our own. Away then with thoſe Maxims and Methods of the Antients about Phlebotomy, which were calculated for the practiſe of another Climate: And yet I deny not but ſome particular Caſes may require it here; only the Cuſtomarineſs and commonneſs of the thing ought to be exploded. For the illuſtration and confirmation of our Diſ-

courſe

courſe about this matter, methinks that that of *Hearnius* is very pertinent, ſetting forth the nature of our Northern bloud and Spirits, that they are qualified according to the Air; * *The Spirits of men* (ſaith he) *are variouſly affected by Aliments, and by the external Air; from whence it comes to paſs, that thoſe people which inhabit the cold parts of the world, by reaſon of their Denſe or groſs Spirits, which flow from a thick Bloud, are ſtout and formidable, and fearleſs of danger,* &c. *The Aſiaticks and ſuch other finer Nations, have a finer bloud and Spirits,* &c. They have finer, and more Spirits, but more eaſily diſſipable by Action, and by the fineneſs of their Air, and of their Bloud, the ſooner repairable after Act on. On the other ſide, we having more groſs Spirits, by reaſon of the thickneſs and ſogginess of our Air, and of our Bloud, thoſe Spirits of ours are not ſo eaſily diſſipated, and remain ſtrong even after action; but becauſe when we loſe our bloud and Spirits together by Bleeding, they are not ſo eaſily or ſuddenly repairable, in regard of the abundance of Serous (yea and groſs) Crudities which alwaies float in the Maſs, more than in warmer and clearer Countries; there-

* *Inſtitut. Med. lib* 3. *cap.* 8.

therefore it is, that though we be more ſtout and valiant in Acting, and will fight in blood to the laſt, when others ſhrink and fail, yet afterwards we generally feel more damage by loſs of Bloud, than the other are wont to do.——But yet after all this, 'tis reported of the *Turks*, that though they live in thoſe delicate Quarters of the Earth, they uſe not *Bleeding*, but are cured of their Diſeaſes without it: which cauſeth wonder, that other Nations (as the *French*, *Italians*, *Spaniards*, and *Portugals*) breathing in the like Climates, ſhould hold it ſo neceſſary, as that they ſeem not, in moſt ſickneſſes, to hope for any relief without it.

I might to theſe reaſons of my own add here alſo the Reaſonings of *Helmont*; but they are too large, and I have already driven out this Treatiſe to a greater length than I intended; only tis fit you take notice of what is ſaid by his Epitomiſer * *Grembs*, who after he hath reckoned up the ſeveral Arguments, concludes the Diſcourſe about Fevers thus; *That the opening of a Vein is a Fraudulent Remedy, and that by it no man can with any aſſurance promiſe health: And whereas Nature is the Cure of Diſeaſes, by how much the ſtronger ſhe is*

* D. Febr. lib. 1. cap. 2

is maintained, ſo much the more happy ſhe is in doing her work; and whereas in the courſe of the Diſeaſe ſhe is ſufficiently weakned by faſting, want of ſleep, and other Accidents, it cannot be convenient to add weaking to weakneſs by letting of Blood. And he further ſignifies in the ſame Chapter, *that bloud-letting hath hitherto been tolerated, only upon this Account, that Phyſicians have not been Maſters of ſuch powerful Medicins as might be effectual without it, and that it would be no longer tolerable to continue the Cuſtom, if ſuch Remedies were invented*: wherefore, if ignorance of nobler Medicaments in antient time, firſt brought it into practiſe, in Countries where it might be better tolerated than in ours, then certainly in this Age and Climate, where ſo many Reaſons lie againſt it, and where God hath given a heart and wiſdom to ſome laborious Students to find out better Medicins and Methods, it is intolerable to ſee ſo many of our Countrimen nurſt up in an opinion, that hardly any Cure can be wrought without it.

And as it tends not upon good account, towards the curation of thoſe many Diſeaſes, in which tis commonly reputed neceſſary; ſo the ſame Author ſaith alſo it is per-

pernicious being uſed under pretence of preſervation; * *prava iſta conſuetudo*, &c. *that ill cuſtom of opening a Vein is no ſmall cauſe of ſhortning a man's life; ſo that tis a wonder to ſee, that there is ſcarce a Houſe in the City, wherein they uſe it not twice a year; ſo prodigal they are of waſting the Treaſure of life! Yea more* (ſaith he) *I have known very many perſons, very inclinable to an ill habit of body, and weakneſſes of the Liver, and yet were ſo bold as to draw bloud every year, and ſo 'tis no wonder they were afterwards ſnatch't away by untimely death.* And in the ſame place he adds this, *Hanc malam conſuetudinem non præpediunt Chirurgi & Tonſores*, blaming ſuch *Chirurgians and Barbers as do not hinder this wicked Cuſtom, which preyeth upon our Vital parts, cuts off the thred of life, accelerates an early death, and is in cauſe that even the ſtrongeſt men have no long life; as is witneſſed by experience.* Thus He.

* Lib. 3. de Brevitate vitæ humanæ, cap. 1.

And ſo this is all that at this time I ſhall communicate upon this Subject of Phlebotomy; intending a more copious Diſcourſe hereafter, if there ſhall be occaſion.

VI. The

VI. The laſt Particular that I mean now to inſiſt on, is an examination of the ſtate of Medicin, in reſpect of Medicaments, the old Scholaſtick *Recipes* or Compoſitions, which have been continued hitherto in the practiſe of Phyſick. I have in part ſhewn you before, by many Inferences made upon the parts of my diſcourſe in the ſeveral Chapters, how inſufficient thoſe Medicins muſt needs be which are in the reaſon of them grounded upon wrong Suppoſitions: For, as I told you, Mr. *Boyle* * hath very well ſhewn, that the Doctrinals, and the Dogmatical Method, and the common Remedies, have a dependence upon each other. Indeed, if you keep to the Doctrin, you muſt hold to the Medicins; and if you uſe the Medicins, you muſt proceed in the Method, according to that Heatheniſh Galenick Doctrin. For, tis true, that *An error in the Foundation cannot be amended in the Superſtructure*: If the trifling Notions of *Elements*, *Qualities*, *Temperaments*, *Complexions*, &c. be out of doors, what remains then, but to pray, that the crude, fulſom, ill-conditioned Meſſes and Mixtures, and Liquors, which are fitted to thoſe Notions, may be thrown out of doors alſo? And if there

* *Exper. Phil. part.* 1. *p.* 66.

there be ſo great an Alteration of Diſeaſes (as I have proved) and they proceeding (for the moſt part) from new Cauſes unknown to the Antients, and of a much more myſterious Nature than formerly, (great Alterations having fallen out in the narrow Compaſs of twenty years paſt) what remains but that we ought to think alſo of another way of *Pharmacie*, for making of new Medicins; and not to deſtroy Apothecaries, but to rectifie and encourage them? As the Caſe now ſtands with them, they are under a miſerable drudgery (and I have heard ſome of them ſigh at it) that Cuſtom prevailing for the uſe of ſo many Horrid Electuaries, Lohocs, ſtrange contrived Pills, crude Droſſie Syrups, endleſs varieties of unguents, and Plaſters, moſt of which are uſeleſs (and were they meliorated would yet be of little uſe) they are obliged to drudge and toil to have all theſe things in readineſs, or elſe they muſt loſe their Cuſtomers; and if they have not Cuſtomers enough to take them off, they muſt ſtand and periſh upon their hands; whereas if theſe were mended by preparation, and reduced to a very ſmall number; or rather if the ſtream of their employment were turned,

by

by putting them upon a *Materia Medica* formed for the moſt part in the noble way of Chymical Preparation, they might, without that great ado which is made every year, provide themſelves in one year for ſeven or more years, of Medicins not lyable to corruption, and in the uſage, of much more advantage and pleaſure to their Patients. In the mean while, 'tis pitty to ſee ſo many ingenious men as are of that Profeſſion, one of the worthy Companies of this great City, condemned as it were to a Trade much like the Confectioners; the greateſt part of which are, as things now ſtand, expoſed to a Temptation to exceed their uſual Bounds, and to relieve themſelves, renounce obedience to their Galenick Maſters; in which courſe, it is humbly ſubmitted to better Judgement, whether they do right to their Friends and Countrimen, or not; and whether a Toleration may not be given them to preſerve themſelves from ruine, till there be more proper Doctrins and Medicins inſtituted, in order to the practiſe of Phyſick; for, what uſe can there be of that piece of ſtate the mere *Scholaſtick Doctor*, when the Apothecary ſometimes muſt direct him, and at all times,

times, as well, if not better, understands the Medicins, than he that seldom hath seen the making of a Medicin? or why should the sick be put to a double Charge for their cure, whenas a common knowledge of the use of common Medicins is likely to render them more effectual in the hands of an Apothecary, that useth them in such a Method as his own experience and Mother-wit will direct him, than in the hands or by the Prescript of such a *Titular Doctor*, as follows only that erroneous Method hitherto commended by the Schools? For my part, were I in a sick condition, and ignorant of the Art of Physick, and were there a necessity that I must submit to a Cure in the old way of means, I would rather commit my self into the hands of a prudent Apothecary, or of any prudent Practiser that is no Scholar, than venture my life at the dispose of any other Practiser that pedantically pins himself up to the old Scholastick Learning and Medicins; because he that is no *formal Doctor* will probably follow his own observation and experience, as he finds things alter'd in the Age and Climate wherein he lives, and so may hit on a cure, because he projects to himself such

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Means and Method, as ſeem agreeable to ſuuh Alteration; whereas a *Doctor* that is inſpired with the Divinity of *Hippocrates* and *Galen*, having heard them boaſt in their Books, that their Maxims and Remedies are little leſs than infallible, and will hold ſo, in all Ages and Countries, to the end of the world, uſually comes with thoſe narrow antiquated Notions to the management of a Cure, and ſo muſt needs miſs the mark, becauſe things are otherwiſe now (though he will not believe it) than they were in the daies of old, or in the Countries of *Greece*, *Italy*, and *Arabia*, from whence the common Oracles and Compoſitions are tranſmitted to us. Therefore doubtleſs the Apothecaries have reaſon to deſire Favor in order to their Support and Maintenance; and the Sick, in many Caſes, may with reaſon make uſe of the one, as well as, or without the other: And, admitt there be a neceſſity (as there ſeems to be) of other Doctrins and Medicins in this Age and Quarter of the world, then certainly if the *Dogmatick Phyſicians* will not be converted, the Apothecaries have reaſon to leave them, and betake themſelves more fully to the Study of Chymical Philoſo-

phy, and Chymical Preparations; and tis advisable for them to fall upon this course betimes, if they mean to preserve their Trade, because now adaies Princes, and Nobles generally apprehend the usefulness, gentleness, pleasantness and mighty power of Medicins so prepared, and what a Fulsomness and Insufficiency there is in the other: So that while it gains ground every day among the ingenious part of men, it is easie to foresee what the state of Physick will be after twenty years more are past, when Death shall have disposed of some few Practitioners, that are (as they think) too old and wise to learn better things.

Tis not to be presumed I can be an enemy to a company of men so considerable, and of so great ingenuity as the Apothecaries, because I wish a Reformation of their Shops, that they may be eased of that yoak that is imposed upon them, and furnish themselves with finer and less bulkie Medicins, such as may invite Physicians of the new and nobler way to employ them; which cannot be expected, till they have laid aside the other Medicaments: For otherwise, necessity will constrain Physicians to erect Laboratories,

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and take to the making of ſuch Preparations within the compaſs of their own Houſes, as will better fit and furniſh them, for a finer and more delicate courſe of Practiſe. And if this Advice will not be hearkned to from me, they may do well to give ear to a learned and moſt ingenious Member of their own Profeſſion, I mean Monſieur *Le Febure*, the Kings Royal Profeſſor in Chymiſtry, and Apothecary in ordinary to the Houſhold, who having dedicated to his Majeſty the Book called *A Complete Body of Chymiſtry*, directs alſo an Epiſtle Entituled *To the Apothecaries of England*, wherein he tells them, *that he hath, and alwaies ſhall have the ſame Tenderneſs for them, as he hath had for his own Countrimen the French Apothecaries: That the end of his endeavors in his undertaking is, to advance the dignity of* Pharmacy, that is to ſay, *the Art of the Apothecary, which now lies bending toward its ruine, if it be not upheld by its true Arches and Pillars, the faithful learned experienced and curious Phyſicians*; and that you may perceive he doth not mean the *Galenick Doctors*, he names thoſe notable Chymiſts of the *French* Nation, *Doctor Duhan*, late publick Profeſſor at *Sedan*, Doctor *Clos* of

Paris, who (as he ſaith) *did him the favor to correct his Defaults, and lead him by the hand through all his endeavors*; and Doctor *Vallot* the *French* Kings chief Phyſician at preſent, under whom he ſerved *as that Kings Apothecary, to perform operations by his direction for a true courſe of* Pharmacy, *which is* Chymiſtry; ſo that you ſee the chiefeſt Phyſicians of our neighbor Kingdom have for ſome time been laboring to ſettle the Profeſſion of Apothecaries upon a new and better, *viz.* the *Chymical Foundation*: For a little after he ſaith, *He gives nothing in his Book to the Apothecaries but what he firſt received from the Phyſicians, ſo that it is to them only that they owe the obligation.* And he invites the Apothecaries to a falling to a more true and legitimate *courſe of Preparation than formerly*, as the only means to attain better Remedies and Compoſitions; and tells them, *that he hath undertaken this labor for their ſakes, becauſe he never yet found one that hath taken the pains or care, to ſhew and diſcover punctually the manner of operating upon things to preſerve their vertue and correct their defaults; and that they may obſerve the difference there is in the correction of thoſe Medicaments which are made accor-*

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ding to the opinions and directions of antient Pharmacie, *with that which is directed and commanded by the Modern*, viz. *the Chymical*; *and that they may observe likewise the Envy and Malice of those that carp at and rail against* Chymistry, *whilst they through ignorance exclaim, that this admirable Art is not employed by its followers, save only on Poysons, whereas they will find Chymical Preparations of* Animals *and* Vegetables, *as well as of other things.*

Now other Apothecaries perceiving, not only by the words of this *Apothecarie Royal*, but by the current of the stream of Practise running every day in other Nations and our own also, toward this new and more safe, as well as delicate way of preparation of Medicins, grounded upon a new and more certain Philosophy than the *Scholastick*, must needs be at a great stand what to do; for, in regard that the pedantick *Galenists*, and the *Semi-Chymists* of the Town, know not how to attempt a cure, but by prescribing the old stuff, in pursuance of the old Dogmatical Learning, therefore the Apothecaries must have that stuff in readiness, or else they lose the benefit of that sort of Practise: and whereas on the other hand, the later and more

excellent Brood of Phyſicians do every day run under the Wings of *Chymiſtry*, and addict themſelves only to Experimental and more rational Learning, and to the inventing and uſing of more noble Medicaments than the Shops as yet afford, there is a neceſſity lying on theſe Phyſicians, for the good of their Country, as well their own honor and content in the diſcharge of a good Conſcience, to decline the uſe of that old fulſom (and for the moſt part) unwholſom ſtuff (the beſt of it being but dull languid, and of little efficacy to encounter the ſtrange *Hydræs* of Diſeaſes in this Age, or ſo much as to reach them in their lurking Dens and Centres of reſidence or retirement) and ſo not finding in the Shops what is agreeable to the new, they inſtead of ſending Bils thither (as the faſhion is) are conſtrained either to make Preparations in their own Houſes, or elſe borrow and buy of one another what they know to be right and fit for their purpoſe: by which means moſt of the Apothecaries are ſtrangers to them, and loſe the greateſt part of advantage, which otherwiſe might accrue to their Society by this new and nobler way of practiſe. What remains then for remedy

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and ſupport to ſo worthy a Society as the Apothecaries, but that they ſhould for preſent maintenance be indulged to make uſe of their own Medicins, at their own Diſcretion, among the Sick, ſeeing the prudent part of them underſtand the nature of them, and the old road of practiſe belonging to them, as well as (if not better than) the *Galeniſts?* For, unleſs numerous Families be impoveriſhed, there ſeems to be a kind of neceſſity of ſuch indulgence, till the old *Galenick Formalities* be reformed, or laid to ſleep, and a more uſeful ſtate of *Pharmacie*, and of *Phyſical learning*, can by degrees be admitted and ſettled in their place, that ſo the Shops and the Phyſicians may mutually correſpond again, and flouriſh in due time, by being eſtabliſhed upon more ſure Foundations, and upon a more rational courſe of Practiſe, than ever can be attained to by a purſuance of the old *Scholaſtick Precepts, Methods* and *Medicins*; which appear every year more fruitleſs and Worm-eaten than formerly, and a very few years experience more will give them a Paſſport.

For, moſt excellently ſpeaks *Fernelius* in this, as in many other things, who though he died a *Galeniſt*, it muſt be imputed to the time wherein he lived, rather than his own default; for, though the noble Art of Chymical Experimental Philoſophy and Phyſick lay then very much in the dark, yet the notable brain of that man had formed to himſelf many more ſublime Notions touching Nature and her operations, than the common *Crambe* of the Schools afforded; as may be ſeen by that refined Piece of his *De Abditis Rerum Cauſis, concerning the hidden Cauſes of Things*; which whoever reads will find he had ſo much good Philoſophy in his head, as had he lived in this Age to ſee what we ſee, would quickly have brought him off to an imbracement of the profeſſion of *Chymical Phyſick*. For, he ſaw well enough, that Diſeaſes in his daies began to alter, and gives us to underſtand, that if there be an Alteration of the ſtate of them, it muſt be alſo in the ſtate of *Medicin*.

[9] *De Abd. rer. Cauſis.*

In his 17. Chapter [9], treating of the *occult powers of Medicaments*, and of *occult Diſeaſes*, he ſhews, that neither of them are to be conſider'd according to the ordi-

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nary way of calculation upon *Qualities*, *Temperaments*, and the like. By occult Diſeaſes he means ſuch as do not lie in a diſtemper of *Elements* and *Qualities*, but have a higher and more ſecret Cauſe, which is termed *à totâ ſubſtantiâ* deſtructive of Nature. By *occult powers* of Medicaments, he means ſuch as have a higher and more ſecret Faculty or power provenient *à totâ ſubſtantiâ*, to oppoſe and conquer thoſe occult Diſeaſes, without conſideration of Temper or Diſtemper ariſing from Qualities, *&c.* In a word, by *occult Diſeaſes* are to be underſtood ſuch new ones as have a Malignity in them, which render them not definable by the common Schemes of *Galenick Philoſophy*; and *occult Medicaments* are to be apprehended ſuch, as by a ſpecifick or peculiar power oppoſe and ſubdue Diſeaſes, rather than by contrary Qualities and Tempers. But take him in his own Expreſſions, and he ſaith thus: *I have* (ſaith he) *already ſhewn, that there are thoſe occult ſilent and ſecret Powers in things, and that they are contained within the limits of Nature: For,* * *if* occult Diſeaſes *at any time ariſe, there is a neceſsity that there ſhould be* occult remedies *contrary to them. There is nothing in this*

* Si occulti Morbi, neceſſe eſt & contraria illis, occultáque remedia, exiſtere.

this whole world, to which Nature hath not produced ſomwhat that is like (or agreeable) *and ſomwhat that is contrary, although it cannot be found out by our diligence. Therefore, as againſt Diſeaſes proceeding from Diſtemper, we oppoſe vertues which are of a Diſtemper contrary; and againſt Diſeaſes proceeding from matter, contrary faculties of matter; and againſt inſtrumentary Diſeaſes, the ſecond powers or vertues of Medicament, which ariſe from the powers of the Temperament and of the matter mixt together: So truly in occult Diſeaſes* à totâ ſubſtantiâ, *it is neceſſary that nature ſhould provide contrary powers, which are themſelves alſo occult, and by diſagreement* à totâ ſubſtantiâ *contrary to them. For, ſhall we think ſuch ſtrange Diſeaſes ſhould lie as incurable and deſtitute of proper remedies? or that nature ſhould be ſo exceedingly defective, as not to afford us things neceſſary for life? Therefore in the nature of thoſe Faculties and Qualities, which flow* à totâ ſubſtantiâ, *many orders or degrees are to be placed, whoſe extremes are contrary: Of theſe ſome are diſagreeable, and wholy enemies to us; on the contrary, others are* totâ ſubſtantiâ *both friendly and familiar, and as it were preſervative of our life. Theſe are they which*

which are cuſtomarily called the occult Proprieties of Medicaments. Thus farr he; the reſult of which Diſcourſe is, that if *a new and occult nature* of Diſeaſes doth at any time ſtart up, there muſt be *occult new and* noble *Arcanaes* made uſe of to cure them. To which Teſtimony of *Fernelius*, let me add alſo that of the beſt of the old Phyſicians, I mean the prudent *Celſus*, who tells us in his *Prefatce*, that there do *often happen new kinds of Diſeaſes, of which no Account can be given by common experience. And therefore it in ſuch caſe is neceſſary to conſider upon what account they began; without which no mortal man can underſtand, why he ſhould uſe one Remedy rather than another.* Now to apply this to our preſent buſineſs; ſeeing I have made it in ſome meaſure apparent, what the Reaſons and Cauſes are of the *ſtrange Newneſs* that is in all manner of Diſeaſes; and the new Cauſes being known how it began; and *Celſus* affirming the Remedies muſt be proportionate to their Nature, and conſequently new; and *Fernelius* avowing, that occult and *myſterious Diſeaſes* muſt have *myſterious Medicins* to cure them; and the Medicins of the Shops not reaching the myſterious nature

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of the Maladies of this Age, but being the beſt of them but languid, becauſe moſt of them proportionated only to the *exterior Phænomena* of Diſeaſes, and not aiming at their internal central natures or eſſences, but being deviſed to anſwer and qualifie obvious Qualities and Temperaments in the main of Medical practiſe, and of the Compoſitions thereto belonging, the uſe of them is to be left to ſuch as neither know nor ſeek after better, if they can get the Sick to ſubmit to them any longer. *Petet autem Medicus novum Conſilium, non à rebus latentibus (iſtæ enim dubiæ & incertæ ſunt) ſed ab his quæ explorari poſſunt.* When the world is at this paſs, then (ſaith *Celſus*) it concerns the Phyſician to entertain new Counſel, not deriving it from things latent (for thoſe are dubious and uncertain) but from ſuch as may by inquiry be made manifeſt: and this prudent Admonition (I ſay) ſhould excite all Phyſicians in this Age of Wonders in Diſeaſes, to entertain new Counſels for the invention of Medicins which may ſuit with the variation of Diſeaſes. What fulſom odious violent ſtuff was in uſe in the daies of *Galen!* which if a man ſhould now uſe, he had need have a Farriers Horn

Horn to force it down the throats of his Patients. Afterward, when the ſtate of Medicaments was amended by the *Arabians*, they being (as * *Langius* obſerves) *Medicamentis Græcorum Medicis opulentiores*, ſtored better with Medicins than the Greek Phyſicians, though the uſe of *Rhubarb*, *Senna*, *Caſsia*, *Manna*, and other fine things, was brought on, and better Compoſitions invented; yet they remained ſtill mighty lothſom and ill-conditioned: And laſt of all, when *Chymiſtry* began to ſhew it ſelf, and held forth a greater purity of Medicin, after the Hot Heads of the *Galeniſts* then ruling had been cooled in their Graves, and their Reproaches buried with them, their Succeſſors by degrees began to refine their Practiſe, and meliorate the Shop-Compoſitions, and what they did of that nature was done by vertue of Notions borrowed from ſuch as they in ſcorn termed *Paracelſians*: and yet after all that they have done to this day, though they cannot ſo amend the old Slops and Meſſes, as to make them friendly to nature, and acceptable to the Stomack, they ſtill retain them, becauſe they are loath to take pains to learn new and better means of practiſe; for, as Monſieur

* Epiſt. Med. lib. 2. Ep. 2.

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* In his Preliminary Discourse.

Le Febure well ſaith, * *they think it becomes not them to ſet their hands to work, to attain a true knowledge of mixt Bodies by Chymical Anatomy. They, and their Sectators, imagin they ſhould wrong their Gravity and Doctoral ſtate, to defile and ſully their hands with the blackneſs of Coals*; to which ſaying of his, let me add, that it is much more eaſe and profit, to lie a bed when the name is up, or inſtead of viewing old Books to ſpend their time in Studying old Nurſes, and Midwives, with the Creatures, the Humors, and the Intereſts of Families: this is quickly done with a *Diploma* in a mans Pocket to authoriſe a Doctor. But (that I may continue the words of that ingenious *Frenchman*) the Courſe of Chymical Philoſophers and Phyſicians hath been quite contrary; their learning lies not in Philoſophical Maxims raiſed by contemplation, *but are perſwaded that operation ought to be joyned to it, to attain full delight and ſatisfaction, and lay firm and ſure Foundations to their Reaſonings; being unwilling to build upon the quickſands of vain, frivolous, and fantaſtical opinions: which makes them willing to undergo the charges, Toil, and labor of practical Chymiſtry, and not be diſ-*

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couraged by watchings and ill ſcents and ſavors, that they may the ſooner attain to a ſolid and delightful knowledge of the works of Nature, and find out by the ſeveral experiments of their works and Proceſſes, the abſtruſe Cauſes of her wonderful effects. For, it is a very difficult matter for any to attain to the exact knowledge of things Natural, without the previous guidance of Chymiſtry, *and an acquaintance therewith; neither can any be reckoned a perfect Phyſician without the help of Hermetick Philoſophy, ſince it is the trueſt ground of Phyſick, without which no Practitioner can deſerve any other Title than that of Emperick. It is not a Gown, nor a Degree taken in Univerſities, which makes a man a Phyſician, but a ſolid knowledge of Nature:* To which I may add, that it is not a croſſing the Sea, to buy that Degree abroad in Forein parts, and a returning home ſwoln with Title and confidence. But there is a *Theorie* belonging to Chymiſtry, as well as a *manual operation.* The *Theorie* directs to a knowledge of the real parts and principles of mixt Bodies; and he who is not acquainted with them is a mere *Emperick*, though perhaps pufft up with Scholaſtick Learning, ſeeing he is altogether ignorant of the

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internal Principles of the Bodies of men and Living creatures, and of *Vegetables* and *Minerals*, and is therefore unable, either to *invent a proper Medicin*, or to give true Phyſical reaſons why he doth adminiſter ſuch or ſuch a remedy for ſuch or ſuch a Diſeaſe, becauſe he conſiders not things real, as the Chymical Phyſicians do; and he knows not, that the rare Preſcriptions of *Chymiſtry* have their Medicins grounded, not upon the actions of *Firſt and Second Qualities* (which the *Galeniſts* are wont to mind) but upon the *internal Specifical vertues of their Chymical Principles*. Thus farr then I inlarge in the Sence of this moſt ingenious Artiſt: by whom it is ſufficiently intimated, that the Medicaments of the Galeniſts impoſed upon the poor Apothecaries, being grounded upon the low Notions of *Qualities and Temperaments*, cannot reach to the Centre of any conſiderable Diſeaſe. But that they are ſo grounded, you ſhall not take my word only for it, but have it acknowledged by one of the beſt of the *Galeniſts* themſelves, I mean *Langius*, who in his time was chief Phyſician to five *Princes Palatine* of the Empire; and after he hath found fault with the vain Compoſitions

ſitions uſed in Shops, concludes thus, * *Nec Medicamentorum Compoſitiones rectè Methodo concinnatas deſpuo, quas cum contrarietatis proportione oporteat morbo eſſe analogas. Remediorum igitur & Medicamentorum compoſitionis eſſe eaſdem Indicationes* Galenus *aſſerit, & rectæ curandi morbos ratio quæ contrariis conſtat, exigit.* "I "do not deſpiſe ſuch Compoſitions of "Medicins as are made according to a "right Method, which ought to an- "ſwer a Diſeaſe by a proportioning "of Contraries. *Galen* affirms, and "the right Method of curing Diſeaſes, "which conſiſts in Contraries, doth re- "quire, that there ſhould be the ſame In- "dications of Remedies, and of the com- "poſition of Medicaments. Then he goes on, and ſhews what *Galen's* conceit is touching a Diſeaſe; a Diſeaſe he makes to conſiſt *in Diatheſi*, an ill Diſpoſition; and what is this *ill Diſpoſition?* he makes it to conſiſt in a preter-natural ſtate of *Hot*, *Cold*, *Moiſt*, *Dry*, &c. (as *Helmont* in many places throughout his work doth ſufficiently mention, and confute it as a Phantſie); and ſo according to the Galenick determination, not only the publike Medicaments of the Shops, but the

* *Epiſt. Med.* 76.

private Bils and Preſcripts of the *Galeniſts*, are framed to this day; as may be ſeen upon the File in the Shop of any Apothecarie; for, as in their Definitions of Diſeaſes, they conſider the ill Diſpoſitions in Qualities as Diſeaſes, whenas they are indeed but the Products and Conſequents of Diſeaſes; ſo in order to the work of curing, they generally proportion the Compoſitions of Medicins by the old *Rule of Contraries*, pretending thereby ſo to temper Ingredients which are of a nature contrary to each other, that out of their ſtrife or contrariety, there may reſult a Medicin of ſuch or ſuch a Temperament, as they phanſie may be proper to encounter ſuch or ſuch a Diſtemper or ill Diſpoſition of the Sick; and thus they triſle about the Shel, but never touch the Kernel, never reach at the eſſential part of a Diſeaſe; whereas the *Chymical Phyſicians*, neglecting qualified Diſpoſitions and Temperaments, conſider the *real Principles* of humane Bodies, as they do either in exceſs or defect, or any other enormous ſtate whatſoever, contribute to the forming of a Diſeaſe; and accordingly in their analyſing of mixt Bodies ordained for Medicine, they make an *examen* of the very

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ſame principles contained in them, and ſo order the Principles in the framing of a Medicament, that there may be in it a proportion of them, anſwerable to the ſame Principles in the body of man, and fitted to reſtrain, rectifie, or encounter them when they in any wiſe are exorbitant, or peccant: So that in this way of curing, there is an accommodating of real Principles in Medicaments to the very ſame Principles in mans body, as grown irregular, and by conſequence cauſative of Diſeaſes. Now,

Utrum horum Mavis, accipe,

chuſe which you pleaſe, and let the world judge, which Sect of Phyſicians is moſt likely to underſtand the nature of Diſeaſes, and the fitting of Medicaments to cure them; whether the *Galeniſts*, whoſe way is not to acquaint themſelves with thoſe *Conſtituent principles*, which are viſible in the Chymical anatomiſing of mixt Bodies, but reſt in mere Traditional Doctrins and phantaſtick opinions, wrap't up in *general Concluſions* and *Definitions* of *pretended Principles*, and of Diſeaſes, the mere Products of wit and opinion, than

which, as my Lord *Bacon* saith, there is nothing more *Polydædalous*, various and uncertain (the Brain of man being a wondrous winding Labyrinth of Conceptions); or whether the *Chymists*, who build their Philosophy or knowledge of Nature in man, and in Medicaments, and in Diseases, upon real operations and productions of things natural, which they *see, feel, and handle?*

Nor are we to consider the Medicaments of the Shops only, as devised upon an Insufficient Foundation of reason, as to the principles consider'd by their Authors in the Devising of them; but to look upon the very Frame of them, and observe what want there is of due correction of Ingredients, and how both Pure and Impure go all together in the Mass; and then it is considerable what an endless number of Kinreds and contraries are jumbled into a Body, whose Vertues strangulating one another, a Vertue different arising from them all, is supposed to be the curative power inherent in the whole Composition; and all that they can say for their *Treacles*, Electuaries, and their other Trumpery, is this, That they have by experience been found good for

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this or that Diſtemper; and who then I pray you are the *Empericks?* Are not they that make Medicins by jumbling Ingredients at adventure, and then plead experience that they have done good, though the Maſs be ſo made that the maker hath no rational ground to aſſure him it is good for this or that purpoſe? And ſhall not thoſe men be reputed much more the *Rational Phyſicians*, who from their knowledge of the eſſential Principles of things do ſo form their Medicaments, that they have a certain ground wherefore they put in this or that, and prepare things thus or thus, from ſolid reaſon leading them by the hand towards the accompliſhment of their work? One years proceeding at this rate in a Laboratory by a knowing Artiſt, ſhall produce Medicins of true nobility and worth, both *Cathartick*s, *Cordials*, &c. ſuch as will in vertue (not to mention pleaſure) weigh down all the bulky ſtuff that hath been ſince the daies of *Hippocrates*, or that can by aſſiſtance of the *Galenick way* be invented to the end of the world.

Nor let men think that I am without Authority for what I ſay, even from the moſt learned and ingenuous of the *Galeniſts*

themſelves, who thought there was great need of a Reformation of the Medicaments of the Shops, and accordingly have complained in their Writings: But I ſhall cite only one, and that is the afore-mentioned *Langius*, in the ſame place of his Epiſtles; where he falls heavy upon the *Apothecaries*, and makes ſuch Practiſers alſo to be no better than the meaneſt Empericks, *who by an ambitious and vain oſtentation of a Plurality and great Bodies of Remedies, ſuppoſe thoſe Medicaments to be the better, which are without Method made up of a world of* Succedaneums, Roots, Stones, Metalls, Herbs, *and* Flowers. And then he goes on thus, *Noſtri Logiatri omnia ad iuanem oſtentationem, in unum pharmacum numeroſum, veluti in confuſum Chaos conglomerare ſolent; quibus Pharmacopolas magis locupletant quàm ægros alleviant*; that is to ſay, *our mere Talkative Phyſicians are wont, out of a vain oſtentation, to heap together all things into one numerous Medicament, as it were into a confuſed Chaos; by which they inrich the Apothecaries rather than eaſe the Sick.* This is very much condemned by *Plutarch* in his Sympoſiacks, * and derided by him, and he brings in the Teſtimony of *Eraſiſtratus*,

Langii Epiſt. ubi ſupra.

* Decad. 4.

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a Phyſician in requeſt before *Galen*, and of a better Temper, upon the ruine of whoſe reputation *Galen* endevors to raiſe much of his own.

But though *Langius* ſpeak ſo hardly of *Apothecaries*, it ought not to be charged upon all; the Fault is not in them, but in their *Galenick Maſters* that impoſe on them a continuation of ſuch Medicins, and hold the people (as well as they can) in an opinion of them, for the carrying on of their own dull dilatory way of Practiſe, which of all things under Heaven cries loudeſt for a Reformation; and the more ingenious ſort of Apothecaries, which are not in confederacy with them, would rejoyce in it as much as any, as a very great Deliverance. For, the ſtuffing of Bils with abundance of Ingredients is that which they ſigh at as much as any. Therefore Mr. *Boyle* would perſwade Phyſicians out of this Humor; they *ſhould* be perſwaded* (ſaith he) *to decline that more frequent than commendable cuſtom, of ſtuffing each* Recipe *with a multitude of Ingredients: For, I think Phyſicians may well be more ſparing, as to the number of the things preſcribed, than moſt of them uſe to be, both to ſave charges to their Patients, and for*

* Exper. Phil. Part. I. p. 139.

other Considerations. The addition of needless Ingredients to the Bulk of the Medicin makes it but the more troublesom to be taken, and the more apt to clogg the stomack; besides, oftentimes the efficacy of the more useful Ingredients, as well as their quantity in each Dose, is much abated by their being yoked with those that are less appropriate, or less operative. Besides, it seems a great impediment to the further discovery of the vertues of Simples, to confound so many of them in Compositions. For, in a mixture of a great number of Ingredients, tis so hard to know what is the operation of each, or any of them, that I fear there will scarce in a long time, be any great progress made in the discovery of the vertues of simple Drugs, till they be either oftner employed singly, or be but few of them employed in one Remedy. And besides all this, whereas when one of these
Poe. 239. 142. Mixtures is administred, the Physician expects but such operation as is suitable to the Quality which he conceives will be predominant in the whole Compound, several of the Ingredients may have particular Qualities that he dreams not of; which working upon a Body that the Physician considers as subject only to the Sickness that he endeavors to cure, may therein excite divers latent seeds

of

of other Diſtempers, and make new and unexpected Commotions in the Body. And a little after, the learned Gentleman hath theſe words; *I fear, that when a multitude of ſimples are heaped together into one compound Medicin, though there may reſult a new* Craſis, *yet tis very hard for Phyſicians to know beforehand what that will be; and it may ſometimes prove rather hurtful than good; or at leaſt, by the Coalition, the vertues of the chief Ingredients may be impaired rather than improved; as we ſee that crude* Mercury, *crude* Nitre, *and crude* Salt, *may be either of them ſafely enough taken into the body in a good quantity; whereas of* Sublimate, *which conſiſts of thoſe three Ingredients, a few grains may be rank Poyſon.*

And to ſhew what a poor eſteem he hath of the beſt reputed Medicaments of the *Galeniſts*, he proceeds thus: *As for thoſe fam'd Compoſitions*, Mithridate, Treacle, *and the like, though I cannot well commend the skill of thoſe that firſt deviſed them; and though I think that when two or three ſimples may anſwer the ſame Indications, they may be more ſafely employed, yet I would by no means diſcommend the uſe of thoſe Mixtures, becauſe long experience hath*

manifeſted

manifeſted them good in ſeveral Caſes. And in a word, though I had not the reſpect that I have for Matthiolus, *and other famous Doctors that deviſed the Compoſitions, wherein-to Ingredients are thrown by ſcores, if not by Hundreds, yet however I ſhould not reject an effectual Remedy, becauſe I thought it proved ſo rather by Chance, than by any skill in the Contriver: And I think a wiſe man may uſe a Remedy that ſcarce any but a Fool would have deviſed.* By which words of his, though couched as tenderly as may be, you may ſee what pittiful ſtuff he reckons thoſe Antidotes to be, which have till of late been held in ſo great eſtimation, but are daily growing out of date, becauſe Diſeaſes being alter'd, they are of Service only in the ſlighter ſort of Maladies which conſiſt in Diſtemper; and though he handſomly brings it in, yet he doth as good as ſay the Authors made a buſineſs of them by chance, and that there was nothing of a ſure Principle that guided them in the Contrivance.

Certainly then, it is high time to look towards other Principles to direct us in the inventing of Medicins proper for the Age wherein we live; nor are we to look only to Principles, and the ſtate of Diſ-

eaſes

eaſes in this Age, but we are alſo to have regard to the Climate, and Country where we live, if in the framing of Medicins we will fit them right for the purpoſe to which we intend them; for, what will cure in one Climate or Country, may either kill, or make the Sick much worſe in another Country, there being a kind of *Craſis* Temper or nature in one ſoil, and under one Sky, both as to Men and Things, which is different from thoſe in other parts even of the ſame Country, much more in the remoter parts of the world; and therefore I do not ſee how we can, even for this cauſe, conceive that Medicaments, and Methods of uſing them, borrowed from *Greeks*, and *Arabians*, and other Quarters of the earth, can with reaſon be relied on, with ſo much Authority and confidence, as our *ruling Galeniſts* would perſwade us at this day. I remember what prudent *Celſus* ſaith *, *differre quoque pro naturâ locorum genera Medicinæ, & aliud opus eſſe Romæ, aliud in Ægypto, aliud in Gallia*; that is to ſay, *the Kinds of Medicin ought to differ according to the nature of places, and that the work of curing is one thing at* Rome, *another in* Egypt, *and another in* France. And that there is a different or

* *In præfat.*

leſs

leſs efficacious effect in one and the ſame thing uſed in different Countries, appears by a Drug now grown into common uſe in *England*, I mean *Coffee*, which *Proſper Alpinus* * relates to have abundance of vertues in that Country of *Egypt*, of which we find no effect in *England*, ſave that it ſerves to make a Liquor harmleſs enough in rhumatick Bodies, for ordinary converſation, like other Drink, but not for any conſiderable peculiar uſes of Medicin, as in *Egypt*; where it is not only common Tipple, as here, but a noted Medicament alſo in many occaſions of Sickneſs, though as to the ſame purpoſes here, it be wholy ineffectual. Beſides, ſomewhat of difference is to be attributed likewiſe to the different manner of Life, Cuſtoms, Diet, and other Circumſtances, which make people even of the ſame Country differ from one another, much more people of divers Countries; which no Body will deny that conſiders the various effects of the ſame Medicaments adminiſtred in the North, and in the South of *England*; or to Gentlemen, Citizens, and Clowns: And therefore, I remember, *Langius*, in his fore-cited Epiſtle, commends to us the conſideration of Domeſtick Medicins, cal-

* *De Medicinâ Ægypt.*

calculated with an agreeableneſs to our own Country, Natures, and Caſes; and the uſe of them, rather than the Medicins deviſed by Foreiners. Indeed tis a wonder to ſee, how a few Authors of one or two particular Countries, have, through the ignorance of mankind, for many Ages, impoſed Medicins, as of univerſal uſe for all the world.

By Domeſtick Medicins, I mean not ſuch only as are growing at home in our own Fields and Gardens, but ſuch Artificial Medicins alſo as are fitted to that which the *Greeks* call *Idioſyncraſia* the peculiar Temper of our Bodies as we are *Engliſhmen*, and to the condition of the Diſeaſes of our Country, there being as great a difference in the proprieties of the Diſeaſes of diſtinct Countries, as there is in the Natures of the people. It were to be wiſhed, that Simples of the growth of our own Country were more uſed, and the knowledge of their Vertues better improved; and then certainly much more might be effected by them than yet we ſee; eſpecially, were our Diet and Drinks more Simple and leſs Luxurious, and people more temperate, doubtleſs *mere Simples* might be of much more efficacy, becauſe our

our Diſeaſes would be more *Simple*, and much leſs *Complicate* than they are ſeen to be. But ſeeing we live in an Age, wherein there is a conjunction of numerous Luxuries, which men acquaint their Bodies with in their manner of living, there is no relying upon *Simples* in the greater Diſeaſes; but there is a neceſſity of uſing Art to the utmoſt, till there be a more Temperate world; and all I contend for is, that in making uſe of Artificial Preparations, we ſhould not rely upon devices of Foreiners, nor ſuffer them to be impoſed upon us (as they have been of old to this day) as the only things to be reſted on in caſe of Sickneſs, and upon that account up-held by Phyſicians for common uſe unto the People: but when we have occaſion to make uſe of Medicins, the only way is to ſeek out ſuch as are by our own Countrimen deviſed, with a regard to the peculiar condition of Nature in our own people, and to the alter'd ſtate of Diſeaſes among us. Upon ſuch conſideration as this it was, that *Hadrianus à Minſicht* quitted the Preſcripts of the ordinary *Diſpenſatories*, and framed a ſtore of Medicaments for his own Practiſe more ſuitable to the Country where he lived, and

and much more pleaſant than thoſe *Torments* (meaning the common publick Medicaments) * *which* (he ſaith) *are ſo nauſeous, lothſom, and abominable, that they are neither eaſily taken, nor held; yea rather, men are miſerably crucified, the whole body put violently out of order, the Ferment of the Stomack perverted, the native heat oftentimes mortified, and the natural ſtrength and vigor much abated:* which are the uſuall effects, eſpecially of their *Pils, Electuaries*, &c. In the room of which, he tells us, he had deviſed *ſuch Medicaments as were fitted to theſe times, the places, and the people where he lived; being new in reſpect of Method, and ſo new, that the newneſs of Diſeaſes, which in this moſt frigid old age of the world, and as it were new Age of maladies (ever and anon ſtarting up and increaſing, and which were utterly unknown to the Antients) doth ſeem not ſo much to perſwade, as to exact and command this newneſs alſo of Remedies. For, if it was commendable in the Antients, yea and in the Phyſicians of all Ages, rather than blameable, that they in their Compoſitions and Preſcripts of Phyſick, had every one a reſpect to their own Air or Sky, and their own people, both* Greeks, Arabians, Spaniards, Italians, French, &c. who

* *In Præfat. ante* Theſaurum Medico-Chymicum.

will

who will blame me, or take it amiſs, that I in my Preſcripts do accommodate my ſelf to our Countrimen, and theſe Northern Parts, eſpecially the Inhabitants of the Lower Saxony, *and of the* Baltick *Sea?* Thus plainly He. And truly, if his example were followed by ſome of the ſurly ſtately Sirs of the Faculty, ſometimes to handle *Coales* and the *Bellows*, ſometimes the *Peſtle* and *Mortar*, and ever and anon to be ſifting and obſerving the new natures of Diſeaſes, and the nature of our own people, and not look upon them through the falſe Perſpectives of old Authors, the Nation had not been now to ſeek of remedies proper to its condition, nor would ſo many every day run away from their unprofitable Recipes, grounded upon old *Forein Gallimafries*, to ſeek, after tedious patience and expences, a remedy from the hands of ſuch as they diſdain by the name of *Quacks* and *Empericks*; which Title better becomes ſome of thoſe that would be thought the Learned, in whom the Title of *Learner* would at this time be much more honorable and commendable than that of *Doctor*, till Practiſe be meliorated, and the People ſenſibly find that the old unprofitable Learning be laid aſide,

ſide, and the pride which belongs to it, by having Diſeaſes better underſtood, and more ſpeedily and effectually removed. We every year ſee, the common Cuſtom of the Sick is (eſpecially if they be purſful, and deſirous to be cured in ſtate) to run the round of all the *Galenick* Meſſes, and after that a Methodical ſolution hath been given to the Purſe-ſtrings, with Phlebotomies enough to the Purſe as well as the Bodie, then when tis a ſhame to hold people in hand any longer, they are even turned off to the bleſſing of *Tunbridge*, or *Epſam*, or ſome ſuch place, where if they be not cured by the Chymiſtry of Nature in thoſe *Mineral-waters*, then, to the honor of thoſe Phyſicians be it ſpoken, who are ſcandalouſly term'd *Empericks*, into their hands they fall as the laſt Refuge, where the world ſeeth how often they receive a Cure; and tis obſervable to reckon what numbers of people have been ready to atteſt the Truth of this, when the *ruling Galeniſts* have to no purpoſe endeavor'd to vex the Practitioners.

Here therefore it cannot be amiſs to repeat what is ſaid by Monſieur *Le Febure* concerning the *Galeniſts*: they buz in the ears of the weaker and more timorous

perſons, and Sex, that they are to take heed of *Chymical Phyſicians* and Medicins, as dangerous, becauſe they deal in Minerals, and ſo are but pleaſant Poyſons;

Part. 2. Book 2. p. 99. 110. * *It is confeſſed* (ſaith he) *that many Remedies in* Chymiſtry *are taken from the Family of Minerals: but for all this, it muſt not, nor can it be granted, that they are Venemous, or contrary to the nature of man's bodie; and to affirm it, is the height of Ignorance: For, if antient Phyſicians have uſed them crude and raw, as they were, without any preparation, as may be ſeen in* Dioſcorides, Galen, Pliny, *and ſeveral other Authors; If ſome of the modern* Galeniſts *alſo have made uſe of them, as* Rondeletius *of* crude Mercury *in his Pills againſt the Pox; and* Matthiolus, *who put* Antimony *in practiſe, calling it by way of Excellency* the Hand of God; *and if* Geſnerus *hath done the like with* Vitriol; Fallopius, *with the Filings of* Steel; *and* Riolanus, *and many others, with* Brimſtone, *for Diſeaſes of the Lungs, why ſhould* Chymical Phyſicians *be debarred from the ſame Remedies, after they have by ſeparating Purity from Impurity, prepared, corrected, and deveſted them from the malignity and venom which they did contain? which is a much better way than the pre-*

pretended correction which Galeniſts *give to their Medicins, who pretend to mitigate the vices and malignity of their Medicaments, by the addition of ſome other ſubſtance, which uſually hath in its ſelf ſome particular vice and impurity; as is obvious in the Preparations of their* * Hellebore, Spurge, Scammony, Coloquintida, Agarick, *and ſome others which they pretend to correct by a ſimple addition of* Maſtick, Cinamon, Cloves, gum Drag: Ginger, *and the like. But I cannot better reſemble the difference between their way of correction and that of the* Chymiſts, *than by uſing a vulgar compariſon touching an unskilful Cook, that in dreſſing of Tripes ſhould think it enough to boyl them with ſweet Herbs, and never waſh or clenſe them from their inward impurity.*

* *The ſe Vegetables are every jot as malignant, being crude as any Mineral whatſoever.*

However the matter ſtands in Diſpute in words, yet in very deed many of the *Galeniſts* ſeeing their own old Remedies very inſufficient, and leſs pleaſing, caſt half an eye upon Chymiſtry, and are content to uſe ſuch common Medicins of that ſort as they can get from the Shops, but then * moſt of them (as *Le Febure* ſaith) doit *by ſtealth*; and thoſe among them that would be thought quainter practiſe

* *Pag.* 111.

than their Fellows, though they retain their old Learning, yet come on ſo farr as to be *Semi-chymiſts* in the uſe of Medicins, dividing their practiſe betwixt the *Laboratories* and the *Shops*; and truly ſo farr they do well, and they want but little of true converſion, ſeeing the only thing that remains to be done is a throwing aſide of the *old Principles* and *Methods*, which no more agree with the right order and Inſtitutions of Chymical Practiſe, than the Laws of theſe Parts of the world do with the Government of *Turky*, which bear as great a diſproportion to each other as can be: to which they muſt likewiſe add a caſting off the old Definitions and Deſcriptions of Diſeaſes, and conſider the Diſeaſes of this Age under other notions and qualifications than they had of old. *Therefore to ſtop the mouths of the* Galeniſts *fully* (ſaith the ingenious * *Le Febure*) *take notice that they uſe in their Practiſe, though Empirically*, Chymical Remedies, *whether they be Natural or Artificial*; *as for example, do they not make uſe of crude* Steel *and* Mercury, *and many more natural mixt Bodies without preparation? Do they not uſe Spirit of* Vitriol, *Spirit of* Sulphur, Mineral Cryſtall, Cremor *and* Cryſtalls of Tar-

* *ubi ſuprà*, p. 110: 111.

Tartar, Crocus Martis Aperitive *and* Aſtringent, *Salt of* Vitriol, *Sugar of* Lead? *And though moſt of them be unacquainted with* Antimony, *and the true time and Method of exhibiting that admirable Remedy, yet nevertheleſs they venture by ſtealth to give it their Patients, diſguiſing it oftentimes with ſome Infuſion of* Senna, *or ſome portion of their ordinary Pils; for, they mix* Antimonial Wine *in their Infuſions, and* Mercurius Vitæ *in their Pils. But that which is yet more to be noted and conſider'd is; that when the* Galeniſts, *by the obſtinacy of a Diſeaſe, are at a ſtand, and can no longer find in their Method a Remedy to cure, and eradicate the evil of it, becauſe they never attained to a perfect knowledge of it, they uſe to ſend their Patients to Baths and Minerals, as to the* laſt Refuge; *which practiſe of theirs makes them tacitly to confeſs, that there is in Minerals a more potent, penetrative and active vertue than in any other of thoſe Remedies which they did put in practiſe before. This Truth is further confirm'd by thoſe remedies which are daily uſed by* Chirurgians *with very good ſucceſs, being for the moſt part compounded of* Metalls *and* Minerals; *but thoſe eſpecially which do work with moſt efficacy.*

It is true, that Chymists *do also send their Patients to Mineral Waters, and injoyn them the use of them; but there is this difference betwixt them and the* Galenists; *that the* * Chymical Physicians *are distinctly acquainted with the* Sulphur, Salt, *or* Spirit, *which predominates in the Waters by them prescribed; which the other Physicians do not, having but a confused and superficial knowledge of the vertue residing and hidden in these waters, and prescribing them only because others have used them before, not being able to give a Reason for the effects by them produced, much less to give an account of the efficient internal Causes of the same, since it belongs properly to the inquiry of* Chymists, *whose peculiar work it is to anatomise Mineral Waters, and demonstrate what Fire or Volatile substances are contained in them: And if the ingenious Artist finds not himself fully satisfied with the examining the Waters, he may further extend his inquiry in working upon the Earths adjacent to these Mineral Springs, and endeavor to discover what Metal most abounds in the* Marcasites *growing about that place;*

* A prudent *Chymical* Physician knowing the nature of the several Waters, is able by skill, in his Study, even with common Water to make a preparation of Water equivalent to any of the *Mineral Waters* which are in use, that they who cannot go to the *Wells* may be furnished at home.

place; which being done, it will be eaſie for him to find what Salt, or what Spirit, is the moſt likely to diſſolve that Metal, and to mix and unite it ſo indiviſibly as it is with the Water: and being thus inſtructed, he can never fail to aſſign pertinent and demonſtrative Reaſons, both of the effects and cauſe of the vertue and efficacy of thoſe Mineral Waters. *If it be anſwered, that* Galeniſts *do alſo give reaſons for thoſe effects, and aſſign them to the* Salt, Sulphur, *or* Spirit *predominant in the Waters; I reply, that they can never fully ſatisfie a curious Inquiſitor and ſearcher of truth in Nature, by Reaſons taken from the* Doctrin of the Schools; *but what light they have muſt be borrowed from* Chymical Authors, *and ſo farr they are no more a* Galenical Doctrin, *ſince they reaſon only by the Principles and Organs of* Hermetick Philoſophy. *Let us then conclude in the behalf of* Chymical Remedies, *and ſay, that they are the true weapons wherewith a Phyſician muſt arm himſelf, to conquer and extirpate the moſt ſtubborn and rebellious Diſeaſes, even ſuch as are held incurable by the ordinary Remedies of* Galenical *Phyſick.*

And yet for all this, the *Galeniſts* will not part with their old *Scholaſtick Methods* and *Principles*, though many of them come

off ſo farr as to make uſe of ſome of the ordinary *Chymical Remedies*, which prove the leſs effectual, becauſe the uſe of them requires other Notions to manage them with advantage, even when they are beſt prepared. But that which is moſt conſiderable, and which brings a ſcandal upon Chymical Medicaments, as well as grievance many times to Patients, is, that the *Galeniſts* venturing to uſe them as they find them in the Shops, do too often light upon unlucky Preparations, ſuch as are *Crem Tartari* adulterated with *Alum*; *Calomelanos*, the *Emetick Powder* called *Merc. Vitæ*, and divers other Medicaments, which being made beyond-Sea by halves, or unskilfully, are bought at low rates, and brought in many times by *Druggiſts* and others trading in ſuch Commodities, of whom Country-Practitioners and ſome Apothecaries do buy them, or elſe of mean Mercenary and unskilful perſons who live in Corners, and venture upon the making of theſe edged Tools at lower rates than others; whereas the moſt induſtrious and ingenious ſort of Apothecaries do, and the reſt ought to make them carefully with their own hands, and to ſeek an amendment of thoſe Preparations:

but

but in the mean while, the *fine fingred Galeniſt*, whoſe fair hand is made only for feeling of *Pulſes*, and ſo dares not ſully them by raking in Cinders, leaves the validity of thoſe Medicaments to the credit of others, and ſo the Patient is left to a miſerable hazard; for, put caſe that one of the *Ambulatory Doctors* hath occaſion to write Bils for ſeveral Patients in a day, and in them hath occaſion to preſcribe thoſe or the like operative Chymical Remedies which are in common uſe, perhaps the Patients live at ſeveral Ends of the Town, and ſo uſually the Bils are ſent to ſeveral Apothecaries, whom perhaps the Doctor never ſaw, much leſs knows whether they be honeſt careful men, or whether thoſe their Medicaments be rightly prepared, what aſſurance can there be for the poor Patients? or what recompence be made them, if miſchief be done by ſucha careleſs way of Practiſe?

Beſides, it is another error in practiſe, that in the moſt urgent and important Caſes, when a Patient is upon the Vertical Point of life or death, as in extreme Caſe of *Fevers*, and the like, the *common Road-Practiſer* is not furniſhed with ſome noble Remedies of his own, to interpoſe at ſuch

Cri-

Critical Minutes, upon the efficacy whereof he might of his own knowledge ſurely rely, rather than leave the Patient to the cure of the Common-Cordials of the Shops, which (if they were of any powerful efficacy in their own nature, yet) do exceedingly differ in force and goodneſs, according to the various Preparations in the honeſt or diſhoneſt, skilful or unskilful, diligent or careleſs hands through which they paſs; yet *Maſter Doctors* Bils go to every Shop alike; that is, the Patient is ventured upon the reputation of any Shop he pleaſe to chuſe, or which the Doctor may commend, whereas in ſuch Caſes of extremity he ſhould think it the beſt way to truſt none but himſelf, and relie upon no remedies but his own, which every good and knowing Phyſician ought, in diſcharge of conſcience, to have in readineſs upon occaſion, ſeeing the leaſt exceſs, or defect in the nature of a Medicin, may at ſuch a time, being relied on, be the deſtruction of the Sick.

Hence it is, that the leſs literate and more Emperical Practiſers, do oftentimes perform Cures in deſperate Caſes, when the Medicins preſcribed by the learned Bils will do no good; the Reaſon where-

of

of I cannot ſo readily aſcribe to any thing elſe, as to this, that they are (for the moſt part) Maſters of good Specificks of their own Preparation, to encounter Diſeaſes in the moſt difficult plunging Caſes, whoſe vertues they are ſure of, & know that they may reſt upon the uſe of them with ſafety. Which Sence of mine touching this matter I the more willingly to expreſs, becauſe it jumps juſt with the obſervation of Mr. *Boyle* in his * *Experimental Philoſophy*; where, after he hath told us out of *Varenius* and *Almeida*, how well Phyſick thrives among the *Chineſes*, and the *Japonians*, where the unlearned Doctors uſe no bloud-letting in their practiſe, and with reputation manage it, without that and other evacuations ſo frequently made here by *Potions*, and *Iſſues*, &c. wiſheth that we had ſome of their Phyſick books to ſet our *European Phyſicians* to learn again: And having told us alſo, how the Art of Phyſick might be improved, *if Phyſicians were a little more curious, to take notice of the obſervations and experiments, ſuggeſted partly by the practiſe of Midwives, Barbers, old Women, Empericks, and other illiterate perſons*, He ſaith, *where the Practitioners of Phyſick are altogether illiterate, there oftentimes*

* Part. 1. p. 220. & 221

times Specificks may be beſt met with, becauſe ſuch perſons being wont, for want of skill in Phyſick, and particularly in the art of mixing Simples, and in that of varying their Remedies according to circumſtances, do almoſt wholy rely upon Specificks, *whoſe vertues from their practiſe, may ſometimes be better gathered, than from that of* * *skilful Phyſicians, in regard that thoſe* Empericks *(beſides that they aſſiſt not with any skil in the* Methodus medendi *the vertues of their remedies) are wont to try to the uttermoſt of the effects of their few Specificks: And the nature of their Medicins may be the better known, in regard they are not wont to blend them, as Learned men but too often doe, with many other Ingredients, whoſe mixture either alters their nature, or makes it difficult to determine, whether the effect be to be aſcribed to what is given for the* Specifick, *or to ſome other of the Ingredients, or to the whole Compound as ſuch.*

* Id eſt. thoſe skilfers in old Book Learning, and the old Methodus Medendi.

And *pag.* 223, 224. the ſame noble perſon adds, *that we ſhould not diſdain the Remedies of illiterate Practiſers, only becauſe of their being unacquainted with our Theory of Phyſick: nor ſhould we by too great reliance on the* Galenical, *or other ancient Opinions, neglect uſeful Remedies, becauſe preſented*

ented by perſons that ignore them, and perhaps too hold opinions contrary to them; therefore I leave you to conſider what is in the perſon of that Emperical Sect, *repreſented by* Celſus, *where having ſpoken of the darkneſs of the Cauſes of things, and the uncertainty of the Theorems of Phyſick,* he ſaith, * that 'thoſe ſpeculations are of no concern at all 'to Phyſick, appears by this, in regard 'that thoſe Phyſicians who differ in opini-'on from others about theſe things, have 'notwithſtanding reſtored men to one and 'the ſame health. And this they have 'been able to effect, becauſe they calcula-'ted their ways of curing, not from ob-'ſcure cauſes, nor from natural Actions, 'which were diverſly apprehended by 'them; but from *Experiments*, accor-'ding as they conceived they might an-'ſwer every ones Caſe: And truly, in 'the beginning, Medicin was not deduced 'from Speculative Notions and Queſti-'ons, but from Experiments, &c. *For though this Sentence aſcribes too little to Reaſon, yet there is ſomething in it that deſerves to be conſider'd; eſpecially ſince we obſerve not, that the late Anatomical diſcoveries of the* Motion of the Chyle, *the* Lymphatick Liquor, *&c. by formerly unknown*

* *In Præf.*

ways

ways, in newly detected Veſſels, hath yet made men cure diſeaſes much better than before; not that I think that Anatomical *and* Pathological *diſcoveries will not in proceſs of time (when the* Hiſtoria facti *ſhall be fully and indiſputably made out, and the* Theories *thereby ſuggeſted clearly eſtabliſhed) highly conduce to the* Curative *part of Phyſick; but yet this obſervation may make it the more reaſonable, to beware of relying ſo much upon the yet diſputable Opinions of Phyſicians, as to deſpiſe ſuch practiſes, though uſually ſucceſful, as agree not with them.* Thus far from Mr. *Boyl*, out of whoſe Learned and Ingenious Book, I have already inſerted divers paſſages of like nature, in the foregoing Chapters, and among the reſt this, *That he thinks it were no ill piece of ſervice to mankind, if a ſevere Collection were made of the Cures of ſuch perſons as have recover'd after a having been judged irrecoverable by the Doctors*; which I am ſure would redound unto no ſmall reputation of ſuch as they have ſcorned as illiterate, and unworthy of their converſation.

But that which pleads higheſt in commendation of the meaner ſort of Practiſers, and which, if any thing, beſpeaks it

as

as the publick Interest to connive at them, is, that without them, not only the rich many times remain uncured, but the poorer sort of people would be totally at a loss; For, Mr. *Boyl* well saith, * *that though to cure cheaply be not properly and in strictness any part of the end of the art of Physick, which considers mens health, and not their purse; yet it ought in Charity, if not also in Equity, to be the endeavour of the Physician, especially when he dealeth with Patients that are not rich; for, not now to say any thing of the Fees of Physicians, which in some places are not very moderate, tis certain that the Bills of Apothecaries, especially in Chronical Diseases, do often prove so chargeable, that even when the Remedies succeed, by that time a poor Patient is recover'd, he is undone, and pays for the prolongation of his Life that which should have been his livelyhood: Whence it comes to pass, that the more necessitous sort of people are either fain to languish unrelieved, for want of being able to purchase health at the Apothecari's rates, or are deterred from applying themselves to a Doctor, till their Diseases have taken too deep root to be easily, if at all eradicated; And this oftentimes, not more through the fault of the Apothecary than*

* Pag. 132.

than of the Doctor, who in his preſcriptions might, for the moſt part, eaſily direct things that would be much more cheap, without being much leſs efficacious. If this be ſo, I ſay the meaner ſort of people were at a miſerable paſs, if they ſhould be left without remedy, by the aſſiſtance of other Phyſicians, or be forced to wait the leiſure of our *Galenick Maſters*, till their Charity be greater.

I for my part, am for Learning as much as any man, and have reaſon to be ſo, having been bred up in the Schools, and know it is of excellent uſe where it is rightly employed; but as for that which is commonly counted Learning in the Schools in order to Phyſick (which I doubt not ere long our Univerſities will reject) I conceive it not only uſeleſs, but deſtructive, miſleading Practiſers upon miſtaken Principles, ſhallow Notions, and a wrong Method, to deal with the Diſeaſes of this Age; and though the moſt ingenious part of thoſe which follow the old Method, cannot but ſee the vanity of it, and of the old Definitions of Diſeaſes, yet as long as Intereſt prevails, and the knot is not diſſolved, expect no Reformation; For, Mr. *Boyle* ſaith plainly, * *that*

* *Pag.* 203, 204.

divers

divers of the Eminenteſt Methodiſts *themſelves have more than once ingenuouſly acknowledged to him, and ſeriouſly deplored with him the incompleatneſs of their Art; and ſince about divers particular Diſeaſes, we have obſerved the Method of ſome of the moſt reputed Doctors in* England *(which yet I think is at this day as well ſtored with Learned men of that Profeſſion, as any part of* Europe*) not only very differing, but repugnant to each other, I ſuppoſe we may without diſreſpect to their Profeſſion, diſſent from the moſt of them about thoſe Caſes, about which they are reduced to diſagree ſo much among themſelves. And it would be worth an impartial diſquiſition, whether ſince the* Methodus Medendi *ought to be grounded on and accommodated to the Doctrin of Diſeaſes, the New Anatomical diſcoveries lately known, and others not yet publiſhed, do not by innovating divers things in* Pathology, *require ſome Alterations and Amendments in the* Methodus Medendi.

To this I anſwer, that perhaps they may; but let me add alſo, that the alteration of Diſeaſes themſelves, according to the deſcription which I have made of its Cauſes in this Treatiſe, is that which cries aloud for an alteration, not only of

the old Method, but of the ſtate and compoſure of Medicaments alſo. As for the *Method*, it was never of a greater height of reputation, than in the days of *Fernelius*; and yet that excellent wit was not ſatisfied with it, but ſaw the vanity of it, and yet could not find in his heart to ſpeak otherwiſe than tenderly againſt it; I cannot remember the Chapter where, but can recite the words, and they are theſe, *Qui Methodum, ſcilicet Scholaſticam, in omnibus nimium pertinaciter exquirit, pariter cum Morbo hominem de Medio tollit*: which is, *that he who in all points too pertinaciouſly inſiſts upon the Scholaſtick Method, doth together with the Diſeaſe remove the man out of the world.* And if he in his days ſaw there was a neceſſity of being looſe from it, is it not a miſerable thing to ſee, that men learned, and of reputation in the world, ſhould tie themſelves (for the moſt part) to it in this new ſtate of Diſeaſes? I remember, *Oſwald Grembs* doth tax them for it tartly, in the Preface of his ſecond Book, that though they make uſe often of *Chymical Medicaments*, yet they adminiſter them according to the *Galenick Method*; but though in this (ſaith he) they would ſeem very Methodical,

dical, yet in truth *they are no better than Empericks, while they give Chymical Remedies, but are ignorant from what ground they have their operation; for* (saith he) *if they know not from what cause Spirit of* Sulphur *gives relief in Fevers, not because tis cold, not because tis hot, not because it cuts and attenuates, but because it extinguisheth the hot Fermenting* Alkali, *which is the occasional, internal, and continent Cause of Fevers, then they cannot be called truly Methodical Physicians, because ignorance of the true cause renders them Empericks, and because if they perform a Cure with those Remedies, they know not why, or what they do.*

And yet truly, they are to be commended, rather than derided in the use of them, because though they be ignorant of the true Method of using Chymical Remedies, in regard they are unacquainted with the Nature and Reasons of the preparation of them, yet much good may be done in the administring by their hands, forasmuch as the excellency of the Medicinsdoth very often produce a good effect, notwithstanding a defect of Method in the application of them. And this also Mr. *Boyl* observes, * *that the unusual efficacies of new Remedies, may probably make*

* p. 204, 205.

the Method of curing more compendious, because one Medicin may be so richly qualified, as to answer several Intentions, which in the common way require diversity of helps and Remedies. Thus for Instance, in the cure of the Kings-Evil, *by the received Method the Physitian must propose to himself several Scopes (suited to several Indications) yet one single Medicin, without any sensible Evacuation, hath wasted the peccant humor, appeased the pains (which before were very great) discussed the unbroken Tumors, and healed the broken ones. — Thus according to the known Method, the great remedy in Pleurisies is copious Blood letting, which is strictly prescribed even to aged persons, and Teeming women, by the famousest of our Practitioners, and, I confess, not irrationally, where the Physician is furnished but with vulgar Remedies: and yet by some* Helmontian *Medicins we have known Pleurisies cured, even in young men without Phlebotomy, and I some while since made a successful Trial.*

Also, that new and more generous Remedies may so far alter the received *Methodus Medendi*, as to make divers of its Prescriptions unnecessary, he gives a notable Instance of the *Rickets*, one of the new and abstruse Diseases, by a slight pre-

ubi Sup. à.

para-

paration of *Colcothar*, experimented in divers children, which Remedie performs its work almoſt inſenſibly, ſave that in many Bodies it is (eſpecially at firſt) Diaphoretick. Hereupon he ſaith, we may conſider, that *oftentimes the peccant Matter, though very offenſive by its qualities, is much leſſer than is ſuppoſed in quantity, and might, if we were but Maſters of Specifick Remedies, either be breathed out by inſenſible Tranſpiration, or carried off by Sweat or Urine, without tormenting, or weakning the Patient, by thoſe other copious Evacuations of groſſer matter*, viz. *Bleeding, Purging, Vomiting, Iſſues*, &c. *which are alwaies troubleſom and painful enough, though not alwaies effectual. Nay that even in Chirurgery it ſelf, if thoſe that practiſe it were as knowing as Nature is bountiful, there would not be ſo often a neceſſity, as tis commonly ſuppoſed there is, of multilating or tormenting the Patient to recover him.* For certain it is (as he ſaith in * another place) that *the Charges and Trouble of taking Phyſick may be very much leſſened*; and that if we did look after a deeper inſight into Nature, *we might by diſcovering the true Cauſes and Seats of Diſeaſes, find out ſuch generous and effectual Remedies* (whether Specificks, *or more Uni-*

Pag. 206.

* Pag. 134.

versal Arcana) *as by quickly freeing the Patient from* his Diſeaſe, *may exempt him from needing either much Phyſick from the Apothecary, or many chargeable viſits from the Doctor.*

And that this is to be done no other way ſo likely as that of Chymiſtry, he a
* Pag. 256. * little after affirms, *that by thu very means, if men want not curioſity, and induſtry to vary and proſecute experiments, there muſt neceſſarily ariſe ſuch a ſtore of new and active Medicins, that in all probability many of them will be found endowed with ſuch vertues as have not been, at leaſt in that degree, met with in the uſual Medicins, whether ſimple or Compound, to be found in the Apothecaries Shops.*

* Pag. 401. Indeed, *there are* (ſaith he in * another place) *certain Preparations and Compoſitions ſo lucky, and whoſe ſucceſs doth ſo much exceed expectation, and the efficacy of common Compoſitions, that the ſame Phyſician, whoſe they are, may upon ſeveral occaſions, preſcribe an hundred others, each of which he may think as rational as any of thoſe, which nevertheleſs ſhall all of them be inferiour thereunto*; and for inſtance, he makes mention of Sir *Theodore de Mayern's* peculiar way of preparing Salt of Steel, which

he

he uſed with great ſucceſs in many obſtinate Diſeaſes.

Now my end in reciting all theſe Paſſages, is, to give ſome countenance to my own Conceptions, and the Judgement of others, who long for a renouncing of the antient Methods and Medicins, while I expreſs their Sence in the language of ſo noble an Author, who is ſo far from approving that piteous pedantick Humor, which cauſeth the whole Drove of *Galeniſts* to lie down, take their eaſe, and ſet up their Reſt in a ſuppoſed ſufficiency and perfection of thoſe old Traditional Notions and Remedies, that he by his own induſtrious example of working, as well as writing, labors to excite others to higher Inquiries, and greater Atchievements, by Chymical operation. And whereas many of the *Galeniſts*, being by tract of time convinced of the ſafety and efficacy of Chymical Remedies, have wheeled off in part, and in the uſe of them are become *parcel Chymiſts*, he concludes his Book with Advice to them, that they ſhould not, by thoſe common Chymical Remedies which are ſold in the Shops, make a Judgement of thoſe higher and more noble ones which may be produced, accor-

ding as the Art of preparing Materials shall be promoted. Nor are they to rest upon the use of those Common Chymi-

* Pag. 186, 187. stries only; for (he saith) * *I must take liberty to add (and that upon serious consideration) that the Chymical Preparations hitherto common in Dispensatories, are, as to the generality of them, farr enough from being the most dextrous, or noble, that can be devised. For, our vulgar Chymistry (to which the Shops owe their venal Spagyrick remedies) is as yet very incompleat, affording us rather a Collection of loose scatter'd (and many of them but casual) Experiments, than an Art duly superstructed upon Principles and Notions, emergent from severe and competent Inductions. And therefore till the Principles of Chymistry be better known, and more solidly establish'd, we must expect no other, than that very few vulgar Chymical Remedies should be of the noblest sort; and that in the preparation of many other, considerable Errors should pass unheeded, and Faults gross enough be apt to be mistakenly committed.*

* Pag. 196, 197. And in * another place he saith, *he must particularly inculcate this, that if we had but a few potent Menstruums to unlock Bodies, or* Alkahestick *Liquors which can re-*

solve

ſolve a great variety of Concretes, without having their vertues, I ſay not impaired, but deſtroyed thereby, I ſcarce know what might not be done in Chymiſtry.

But whereas the Cry of the *Galeniſts* is, that though the *Chymical Phyſicians* boaſt high of the vertues of their Remedies, yet they fall ſhort of their Promiſes, *Let me advertiſe you* (ſaith the * ſame learned Gentleman) *that if divers Chymical Remedies have ſeemed upon Trial leſs effectual than indeed they are, it is becauſe they have been tried by ſuch Phyſicians, as weaken their efficacy by not adminiſtring them as they ſhould: For, ſome Phyſicians will never exhibit a Chymical Remedy, till the Patients ſtrength hath been almoſt tired, if not quite ſpent with the unproſperous uſe of divers other clogging and debilitating Medicins. Others are ſo diffident of Chymical Remedies, that they never dare exhibit them in a full Doſe, nor by themſelves, but will blend a ſmall quantity of a Chymical Medicin with other Ingredients, which either conſtitute with it a Medicin of new Qualities reſulting from that Mixture, or at leaſt much clogg or enervate the activity and vertue of the Chymical Ingredients; by which, even in ſo inconſiderable a Doſe, theſe diſtruſtful Doctors dare*

* Pag. 394.

dare yet require that great matters ſhould be performed. And another ſort of Phyſicians there is, * *who are of ſo deſpondent, or rather partial an humor, that if a Chymical Remedy or Specifick, do not preſently perform the hoped for cure, though they find that even upon their diſadvantageous manner of adminiſtring it, it doth good, yet they will quickly deſiſt from the uſe of it: And becauſe it doth not do wonders, they will not ſcruple to affirm that they have tried it, and found it do nothing; whereas they are wont to continue their own Courſes of Phyſick without Diſcouragement, though it be uſually ſome weeks before the Patient find any good by them, and oftentimes the Patient is, by the tedious courſe of Phyſick he hath gone through, very little better'd, if not much impaired, as numbers of the Printed Obſervations, as well as daily experiences, do teſtifie. Which* (ſaith he) *I ſpeak, not with an intention to diſparage Phyſicians in general, the moſt learned and ingenious of them being free enough from the partiality which I here take notice of, but to keep good Remedies from being diſparaged by the Envious or unskilful Trials of bad Adminiſtrers* (as, ſay I, moſt of the Semi-Chymical Galeniſts uſe to be.) *And though indeed ſome Chymiſts are ſo vain-glorious, or unwary,*

* Pag. 394.

unwary, as to promiſe, that the operation of their Remedies ſhall be as well ſudden, as effectual, yet if the Medicins themſelves be found available, although not ſwiftly ſo, that ſlowneſs ought to make us but condemn the Boaſtings of the man, not reject the uſe of the Remedies. For (as he ſaith * a little after) *ſometimes the Patients Conſtitution makes the Medicin preſcribed by the Receipt unfit to be adminiſtred; and ſometimes too, the Diſeaſe for which the Receipt is proper, is in the Patient complicated with ſome other diſtemper, which may be as much encreaſed by the Specifick, as the other Diſeaſe may be leſſened.* Of which he gives ſome Inſtances there, too large to repeat.

* Pag. 296.

Another Trick of the Pedantick ſort of Galeniſts, and a very common one, is, that if Chymical Medicins be adminiſtred, though they be of the nobleſt, the ſafeſt, and beſt prepared ſort, and much more gentle and efficacious (as generally the meaneſt of them which have due Preparations are) than any they can pretend to out of the common ſtuff of the Shops, yet if the Patient prove not curable by them, but draws down to death, and if the Fore-runners of death be, as in many Caſes they are, great Pains and other dire Symptoms, then

then knowing that the more ignorant and fearful ſort of people are, even by the malice, or ignorance of ſuch Phyſicians, as well as by their own Phantſies, made prejudicate againſt the name of Chymiſtry, thoſe Phyſicians craftily take occaſion from thence to work upon peoples weakneſs, and buz into their ears that thoſe afflictive Conflicts of Nature and the Diſeaſe are cauſed by the Chymical Remedies, than which (I ſay) rightly prepared, there are not ſafer Remedies in the world. Upon this account it is, and by ſuch ſubtile Inſinuations (which are the Arts they have leiſure to ſtudy, and little elſe to do, becauſe all their Do lies in a Pen and Inkhorn and a *Recipe*) that they hold ſome part of the people in bondage to this day, though the greateſt part are by time and obſervation grown too wiſe now to be bug-bear'd by them any longer. When *Chymiſtry* firſt began to open the eyes of the world, Oh then there was nothing but Fire and Fagot againſt it, becauſe the *Galenick Maſters* were diſturbed by the Light that it gave to old Ignorance and Error; whole Colleges began to ring againſt it as a new Art of poyſoning the world, yea and no leſs than an Invention of the Devil,

as

as the many Books they then ſet forth againſt it, do ſhew, and among the reſt, none is more fierce than that which was publiſhed by the College of *Paris* againſt Sir *Theodore Mayern* and the famous *Quercetan*; and the numerous bitter railing Invectives contained therein againſt Chymical Remedies, I might here inſert, were they not too tedious. Let it ſuffice to know, that they railed againſt things they underſtood as little as ſome of ours do at this day, being ſuch Remedies as made thoſe two perſons men famous in their generation all over *Europe*, and yet Galenick Ignorance and Envy was ſo bold, as to condemn them by publike ſentence (touching which you have had an account in the firſt *Chap.* of this *Treatiſe*) and not only them, but *the whole Art of Chymiſtry it ſelf.* And yet it was not long after, that theſe angry men the *Galeniſts* began to cool a little in conſideration of the harmleſs and noble effects of ſome of the Medicins, the meaneſt of which they ſaw were able to effect greater Feats in curing, than the beſt of their old ones; ſo that after they had grumbled and gazed and repin'd and paus'd a while, they began to venture to uſe ſome of the more common ſort of them. Oh, what, *Mercury!*

cury and *Antimony!* they were not once to be touched ſo much as with a pair of Tongs: But at length they did venture both upon *Mercurial* and *Antimonial* preparations (to their praiſe be it ſpoken) and theſe they are even to this day ſo fix't upon (I mean the more common preparations which they have ſetled the uſe of in the Shops) that moſt of them reſt there, and care not to budge an inch from them, to buſy themſelves either in Meliorating them, or inventing higher and nobler Medicaments of that kind; nor doe ſome of them willingly afford a good thought or word for any that are invented, or that are put upon improvement and advance by the induſtry of the more laborious *Chymical Phyſicians*; to whom (next under God) this new Age of Diſeaſes is beholden for their Cures in moſt of the Chronick and moſt obſtinate Caſes; as every days experience doth now abundantly manifeſt.

And therefore that advice of Mr. *Boyl* falls in very pat here, when he tells us, *(Pag. 390, 391.) * *We muſt not be ſo timid as to ſuffer our ſelves to be perſwaded, that if a Patient miſcarry after the uſe of thoſe Remedies, the fault muſt neceſſarily belong to the exhibited Medicin.*

dicin. For oftentimes Nature will in de-ſpight of Remedies make a Metaſtaſis *of the peccant matter, and thereby impair the condition of the Patient; and much oftner before Death, the Conflict of ſtrugling Nature and the conquering Diſeaſe, doth manifeſt it ſelf in horrid and dreadful Symptoms, which ſome envious or ignorant Doctors (for the more learned are wont to be more equitable and leſs partial) do injuriouſly impute to the Chymical Remedy given before the appearing of thoſe Symptoms, not conſidering that the like Accidents are wont to attend dangerous Diſeaſes, and dying Perſons, where* Galenick Remedies *only, and no* Chymical *ones at all have been adminiſtred. And that divers of the moſt Eminent and Methodical of our Modern Phyſicians, ſcruple not now to uſe frequently both* Crocus Metallorum, Mercurius Dulcis, *and ſome other Chymical Remedies, and to impute the miſcarrying of the Patients that uſe them to their Diſeaſes, rather than the Medicins; though not many years ſince, all the frightful Symptoms accompanying the dying Perſons to whom they had been exhibited, were confidently imputed to thoſe Medicins.* Thus he. To which let me add, that as it is nothing but Pride, Lazineſs, and Covetouſneſs, which

which hinders ſome men of this Profeſſion from being a means by their Intereſt and Authority to beget a more general eſteem of Chymiſtry, as is due; and from giving a good example by induſtry unto others, to promote the invention of nobler Remedies, more fit for the occaſions of this Age, than the common ones; and from owning truer Principles of Philoſophy conducible thereto; ſo there is no queſtion, but a little more Obſervation and Experience of the people, touching the truth of theſe things, will in the revolution of a very few years, inable the meaneſt to make a Judgement between things and Perſons that differ, and totally diſable Calumniators in their old Practiſe, not only of Phyſick, but of ſcandalizing the more rational Practiſe, and the more excellent Remedies of other Phyſicians.

And yet truly, I would not be miſtaken, I am not ſo much for the uſe of *Chymical Preparations*, that the Fabrick of Curation ſhould reſt wholy upon them, excluſive of the uſe of Simple and Single Specificks, which Nature her ſelf hath prepared for us; I have collected ſuch ſtore of them by converſation with the meaner

er Persons and Practisers, which the Learned (as they would be counted) are wont to scorn, and of so great efficacy have I found them, that I have no reason but to applaud rather than exclude them, and admire the wisdom and mighty power of the Creator, that hath endowed plain things with extraordinary vertues.

Nor am I (as the same noble Gentleman * speaks) *of the humor of some Chymists* (for there are faults on all hands) *and of others that practise Physick, who so dote upon the Productions of their Furnaces, that they will scarce go about to cure a cut finger, with less than some* Spagyrick *Oyl or Balsam, and in slight distempers have recourse to Chymical, and perhaps to Mineral Remedies, which being for the most part such as vehemently alter the body, they do oftentimes more harm than good, when employed in common cases that need not such active Medicins. And methinks those that practise, as if nature presented us nothing worth the accepting, unless it be cookt and perfected by* Vulcan, *might consider, that* Paracelsus *himself often employeth Simples for the cure even of formidable Diseases. And though for parti-*

* Pag. 158, 159.

cular reaſons, I be inclinable enough to think that ſuch ſearching and commanding Remedies as may be ſo much of kin to the Univerſal Medicin, *as to cure great numbers of differing Diſeaſes, will hardly be obtained without the help of Chymical Preparations, and thoſe perhaps of Minerals; yet as to moſt particular Diſeaſes, eſpecially when not yet arrived to a deplorable height, I am apt to think, that Simples, or other unelaborate mixtures, may furniſh us with Specificks, that may perform much more than ſome Chymiſts are wont to think, and poſſibly be preferrable to many of their coſtly* Magiſteries, Quinteſſences, *and* Elixirs. Helmont *himſelf, a perſon more knowing and experienced in his Art, than almoſt any of the Chymiſts, ſcruples not to make this ingenuous confeſſion,*

* Helmont *Pharmac. & diſpenſat. Nov. p. 458.*

* I believe (*ſaith he*) that Simples, in their Simplicity, are ſufficient for the curing of all Diſeaſes. *And he elſewhere truly affirms, that there may be ſometimes greater vertue in a Simple, ſuch as Nature affords it us, than in any thing that the fire can ſeparate from it. And certainly, the Specifick properties of divers, if not moſt Simples, are confounded and loſt by thoſe Preparations,* &c. And as for the long and tedious

tedious Proceſſes of ſome Chymical Preparations, he ſpends two * or three *Pages* to ſhew, that leſs elaborate and more skilful ones would procure Medicins of much greater efficacy. For (ſaith he) * *it is not the elaborateneſs, but the skilfulneſs of Preparations, that produceth the noble Remedies; and a few Teeming principles well known and applied, will inable a man with eaſe to make better Remedies, than a great many furnaces and Glaſſes, though never ſo well contrived, and though very uſeful in their kind:* And of this he gives an inſtance in the preparation of *Opium*, which in the Shops is imperfectly done by adding *Saffron*, *Cinamon*, and other *Aromatical Drugs* to make it into a *Laudanum*, whereas (he ſaith) the correction is better performed by a digeſtion of the *Opium* in wine that is impregnated with an equal weight of the Salt of *Tartar*; the great power of which *Salt*, to correct the moſt violent as well as Narcotick Ingredients, may be ſeen by that Pil called *Matthews* his Pil (the Invention whereof is now claimed by an other Artiſt in Chymiſtry) wherein there is a great quantity of *white Hellebor* as well as *Opium*, and the grand cor-

* *Pag.* 160, 161, 162.

* *Pag.* 185.

rector is that *Salt of Tartar*. The truth is, a good Mother-wit, that can reason out the Nature of mixt Bodies, whether Vegetables or Minerals, by examining those *Chymical Principles* of which (we see) they are composed, may do very much with the Simples both Vegetable and Mineral, without much straining by long preparations; I know it experimentally, only by making Mixtures, and Infusions, & Fermentations, without the concurrence of Fire, or Furnaces; & how much I have atchieved by this plain way, I may give an account of hereafter; and particularly in the examination of Roots and Plants, some by *Incineration*, but most by Infusion in several Menstruums, and many times by Mixtion of the Juices with each other, & with other Liquors also, and sometimes by mere single putrefaction of the Plants themselves; which courses who ever will follow, may find a way to give a better account of the nature of Herbs, and other Vegetables, than the world is yet acquainted with; very little having been known of Herbs since the days of *Dioscorides*, but what came by meer chance; for, the *Herbalists* have but written after his

his copy, and tranſcribed out of one anothers Books; and the *Galenick Maſters* (have for the moſt part) conſidered only the outſide qualities of *hot*, *cold*, *moiſt*, *dry*, &c. and by eſtimate of theſe endeavoured to pry into their Natures, ſo that they ſtill reſt in the *dark Chaos* of unknown vertues, or *hidden Qualities*; whereas if they would take that Bunch of Keys, the ſublimer Notions of the Principles of Chymical Philoſophy, and uſe them, they might even by common little wayes of Operation and Experiment, unlock the *Simples*, and look into the more eſſential part of their Natures; for even *Vegetables* may come to be underſtood this way, as well as the parts or Principles of Minerals come to be Analyſed and Apprehended by the help of Fire, and more elaborate operations.

And truly, this courſe of handling *Vegetables*, I take to be every jot as *Chymical*, as if they were examined only by Fire, like the Minerals, and ought to be Characterized by the name of *Chymical Remedies*, becauſe he who makes the inquiry to invent them, is guided therein by reaſoning according to the Principles

of the *Chymists*. Nevertheless, this is not said to lessen the repute of that good way of examining and improving *Vegetables*, as well as *Minerals*, by the help of Fire and Furnaces; for nothing is more necessary than that helps in every way be made use of, for discovering the nature and vertues of all mixt Bodies; and hitherto we have been beholden (for the most part) to the fire for our discoveries, and are like to be; so that the hinting and offering of a new way of discovery can be no prejudice thereto, but all courses ought to be taken to improve the knowledge of the vertues of Vegetables as well as Minerals, because Vegetables are most for ordinary use, and when they will not doe, then Minerals are often of most concern in the more desperate and deplorable Diseases. Therefore, tis a great mistake in the common sort of people to think, that *Chymical Physicians* deal only in *Minerals*; and that mistake of theirs hath given occasion to Scandalizers to work upon their Phantsies an aversation from the *Chymists*, whereas none deal more in *Vegetables* and parts of *Animals* than they do, for the making of Medicins; only *Mi-*

nerals

neral Medicaments are uſed upon occaſion, and may be with as much ſafety as the other, at the diſcretion of ſuch Phyſicians as take care of the preparation.

And certainly, one may eaſily conclude, that their Knowledg and Diſcretion is moſt to be relied on, who are beſt acquainted with the *Phænomena*, the operations and Mutations of Nature in Natural Bodies, and according to them are able to conſider and make a due eſtimate both of things natural and proper in the Frame of Medicaments, and of things preternatural and exotick in Diſeaſes, and from the conſideration of *real Principles*, prevailing in the one, and peccant in the other, proportion their means and Methods of Curation accordingly: this prudent and moſt natural Courſe is that, which guides the learned *Chymical Phyſicians* in their Inventions of Medicins, and in the application of them. For *Chymiſtry* is without Diſpute the *trueſt Handmaid* (as Mr. * *Boyle* calls it) *to Phyſiologie, and will not a little contribute to clear up the nature of Digeſtions, and of thoſe Deficiencies or Aberrations in them, which produce a great part of Diſeaſes.* And truly,

* *Part 2. p.* 35.

truly, though Chymistry should never have brought to light any considerable Medicin for the use of men, yet it is praise-worthy, and to be encouraged even upon this Account, that besides the unlocking of parts and principles in mixt Bodies, the operations thereto belonging are made use of by learned men now adaies, to illustrate the Doctrin of Diseases. For, let me once more cite what Mr. *Boyle* saith, * that *since the Liquors contained in mans body abound, divers of them, with Saline or Sulphureous Parts, He that hath been by Chymistry taught the nature of the several sorts of Salts and Sulphurs, and both beheld and consider'd their various actions upon one another, and upon other Bodies, seems to have a considerable help to discourse groundedly of the Changes and Operations of the Humors, and other Juices of the Body.*

* vid. sup. pr.

Thus the present learned Professor of *Leyden*, *Francis de Le Boe* in his Medical Disputations, illustrates the Alterations and Secretions of Juices and Humors in the Body by the operations of *Chymistry*; and when he comes to that part which concerns the * *Process of the Chyle* both in the Stomack and the Bowels, *Let me* (saith he)

* Disput. 2.

he) *for the manifeſtation of that Proceſs, which hath hitherto lain hid* quaſi in Democriti puteo, *call in to my counſel and aſſiſtance*, Chymiſtry, *an Art which produceth things admirable and ſtupendious every day, and is certainly of principal uſe in the diſcovery of natural Mutations, and in ſome Particulars, if I may ſpeak it, exceeding Nature her ſelf; the moſt profitable and only neceſſary Means, for the conſtituting of Natural Science, and a ſolid Body of Phyſick.* And in * another place, *I ſhall not* (ſaith he) *as others have done hitherto, conſider the nature of Diſeaſes according to the Etymological definitions, whereby the Eſſences of them are very ill explained, and the ſick worſe cured, men reſting in former time upon a dubtous, barren, and ſometimes miſchievous Grammatical Diſquiſition of Terms in the Art of Phyſick; but my principal care is about the laying of ſuch a ſolid Foundation of the Art of Phyſick, as may be fit for the better ſort of Practiſers, who deſire to contend with Diſeaſes, not wrangle about Phantſies; and therefore it ought to be, by the help of* Sence *and* Reaſon, *derived from the true Fountains of things Natural and Medicinal, that we may, by a Chain of Reaſonings thereupon,*

* Diſput 3.

upon, be led to a finding out the true Cauſes of any Diſtempers whatſoever, and the right way of curing them. In proſecution of his purpoſe, he hath (as Doctor *Willis* did before him) from the Fermentations and efferveſcencies, alterations, and quietations of External Liquors, endeavor'd to illuſtrate the like of the liquors in the Body of man, as to the cauſation & curation of Maladies.

It is of great uſe to obſerve the alterations befalling theſe two Bonds (or as it were Ligaments) of the Parts of mixt Bodies, the *Salt* and the *Sulphur*. It is the Principle of *Water* which diſſolves that of *Salt* (as may be ſeen in Hydropick Bodies;) which that Principle called *Sulphur* (the oyly part) cannot do, but ſubmits to the Fire, which the *Salt* will not do: and if while the Principle of *Sulphur* is added to Fire, the vapors thence elevated have not free egreſs to ſpend themſelves abroad, they are ready to extinguiſh the Fire, and enervate its operation. Juſt ſo it fares many times in man's Body, when the *Vital Flame* thereof by ſome accident is hindred from making a due diſſipation of an abounding Balſamick Sulphur in the Bloud: For, even as a Candle burns, ſo doth

doth the Lamp of life, by a convenient viciſſitudinary ſupply and diſſipation of oyly matter, *viz.* of that Sulphureous Balſamick Alimentary Juice which is added every day. It were too tedious to Philoſophiſe at large upon theſe two *Principles* in reference to Sanity and Sickneſs; therefore I cut ſhort.

Hitherto, *Spittle* hath been look'd on as almoſt a mere *Excrement*; but he who conſiders, that if the *Spittle* be either defective or vitious, the work of Concoction goes not right on in the Stomack, will admit it to be an uſeful *Ferment*, conſiſting principally in a proportion of *Water*, *Salt*, and *Spirit*; and when the Stomack through its default is put out of order, he that attempts to cure it without a Notion of theſe things, may poſſibly by ſome lucky Stomachick Medicins relieve and aſſiſt the Stomack, but never throughly amend the Cauſal Default, unleſs it be by mere Chance.

Bile alſo hath, till *Helmont* opened the eyes of this Age, been thought an *Excrement*, but now men begin to be of his opinion, that it is one of the nobleſt *Ferments* of the Body, ſeparated from the Arterial

terial blood, and ſerving for many uſes; and particularly ſubſerving to the motion of the Chyle, after it is paſſed from the Stomack to the Inteſtines, by promoting the Periſtaltick Motion of the Guts; and that the Chyle being a Subſtance impregnated with a *Volatile Spirit*, a *Lixivious Salt*, and an *acid Spirit*, by the Fermental Action of the Stomack, becomes in the *Duodenum* impregnated by a farr greater quantity of *Lixivious Salt*, and ſomewhat more of a *Sulphur*, or oyly nature, and of a *Volatile Spirit*, than it had before, in order to its further Proceſs in the *Milky Veins* and in the Heart, till it put on the rudimental Form of Bloud; which *Chymical Notions* whoever is ignorant of, will hardly be able to underſtand the Nature of thoſe many Diſeaſes called *Bilious*, with other Diſtempers incident to the Stomack and Bowels, and conſequently be leſs able to apply ſuch Medicaments as may meet with them, according to the predominancie or exorbitancie of either of thoſe Principles, ingredient either in the *Chyle*, or in the *Bile*; from whence ariſe abundance of fretful and frightful Diſeaſes, eſpecially in Children. As for Inſtance, when the Fer-

Ferment of the Stomack, or the Bile, grown extravagant through the over acidity of the Spirit, or through exceſs or aduſtion of the Lixivious Salt, cauſeth *Frets* in Children, or Torments of Belly in elder people, then the Galenick Medicins uſually given to lenifie, dulcifie, and alter the matter, and pacifie the Bowels, prove for the moſt ineffectual, whereas other Medicins adminiſtred by the hand of a Chymical Phyſician, which are ſevere in appearance, but having in them a power of ſtrangulating thoſe *Saltineſſes* and *Acidities* which cauſe the Diſtemper, do immediatly put an end to it. After this manner have I ſeen that ſevere corroſive Liquor called Oyl of *Vitriol* by addition of the Acid Oyl of *Tartar*, or of the Salt of *Tartar*, loſe that Corroſive acidity which it had before. Not that I would have Oyls of *Vitriol* and *Tartar* uſed by any to do the like, in ſuch Caſes, within the Bodie; but I mention the Experiment, only to illuſtrate my Diſcourſe, and convince the Reader, that a learned *Chymical Phyſician*, who underſtands theſe things, and thereupon knows immediately, from ſure and rational Principles, how to form a

Medi-

Medicin, is the man more ſurely to be relied on for Cure, than the common *Galeniſts*, who reſt upon old Notions, and general Shop-Medicins; and are uſually ſtrangers to the Properties of things, as they are diſcoverable by the genuine Principles and Operations of Nature. Thus thoſe *Acidities* abounding in *Quartans* are often cured by Liquefactions of *Sandivere*, or of *common Salt* after its being calcined, a convenient number of Drops being duly exhibited in ſome proper Vehicle. And if thoſe *Acidities* or *Acrimonies* be dealt with by Medicaments abounding with a *Volatile Salt*, they are immediatly lenified: Juſt as *Spirit of Wine* being cohobated with *Spirit of Salt*, they ſo attemper each other, that the one loſeth its Fervor, and the other its acrimonious Acidity.

Thus in the many frequent Diſtempers, which ariſe from Ebullitions of ſharp and acid Liquors in Scorbutick Bodies, in which Caſes the *common Galeniſts* preſently are for blouding to allay them, a learned *Chymical Phyſician*, being Maſter of ſuch Medicaments, as have power immediately to alter, pacifie, or precipitate thoſe

thoſe Acrimonies and Acidities, performs the work, without any ſuch damageable diminution of Bloud, which is the grand Vehicle of vitality; and the draining of it in ſuch Caſes, brings the Bodies of Patients to ſuch a Paſs, that after once or twice relieving them by it, the moſt dangerous Conſequent is this, that when they fall ill again, they look for it, and (Cuſtom proving Another Nature) can have no relief without it, till the habit of the Body being deſtroyed by *Iterated Phlebotomies*, there remains no more place for the practiſe of that, or any other Remedie whatſoever.

It is not above a Fortnight ſince, that a youth lying in a very Feveriſh ſtate, with an ill Cough, I perceiving it came from a *Wormatick Cauſe* in the Bowels, order'd him a Cordial impregnated with ſuch *Alkaliſate Salts* as might alter the matter, kill the Worms, and abate the Feveriſh Heat, all in one; which a certain Doctor being brought in by ſome of the Friends to view the ſick, having taſted, he ſaid there was ſtrong water in it, and 'twas too Hot, and ſharp, and no more to be uſed, *&c.* becauſe little conſidering the *Worms* in the Caſe,

and

and that when that Cauſe was removed, the Fever and Cough would end of it ſelf, he concluded from the heat it was a *Hectick Fever*, and ſo ought to be plied with *cooling Pectorals*; but the Boy two or three daies after, avoiding a *Worm*, immediately recovered, without more ado. I had not mentioned this, but to ſhew, how apt ſuch Phyſicians, though otherwiſe learned, are to be miſtaken by the outward conſideration of *Hot* and *Sharp*, and other *Firſt* and *Second Qualities*, when they go no further to ground a Judgement concerning the nature either of Diſeaſes, or Medicins.

But what ſaith noble Mr. *Boyle* upon this ſubject? * *He that finds* (ſaith he) *that there may be acid Juices in the Stomack, and in other parts* (*as is frequently evident in the ſharp Liquors which many Stomacks caſt up*) *and that there are alſo Sulphureous Salts in the Body, as is apparent in Blood and Urine, which abound with ſuch: He that obſerves how acid Liquors loſe their Acidity, by working upon ſome Bodies, as Spirit of Vinegar grows almoſt inſipid upon the* Coral *it hath corroded: and how thoſe Saline Liquors, by working upon certain Bodies, degenerate into Salts of another nature, as we have ſometime,*

* *Part.* 2. *p.* 28, 29.

times obſerved in Oyle of Vitriol *working upon the Fourth part of its weight in Quick-Silver; and how the contrariety of Acid and Sulphureous Salts makes them ſometimes diſarm, ſometimes, after ſome ebullition, Precipitate each other, and ſometimes unite into a Third ſubſtance of a differing nature from either of thoſe from whoſe Coalition it reſults, as we ſee in* Tartar Vitriolate, *and (as I have obſerved) in a Salt which I ſometimes make to emerge from a due proportion of Oyle of* Vitriol *and Spirit of* Urine, *freed, after conjunction, from their Aqueous Moiſture: And he, in a word, that hath carefully Analyſed and made Trials on many Parts both of the Macrocoſm and Microcoſm, and heedfully applied his Experiments made on the former, for illuſtration of the Changes obſervable in the latter, ſhall be likely to explicate divers particulars in Pathology, more intelligibly than he that is a ſtranger to Chymiſtry.* And ſo from ſome obſervations of his own he concludes, *That the generality of former Phyſicians have aſcribed too much to the Humors, under the notion of their being Hot, and Dry, Cold, and Moiſt, or endowed with ſuch other* Elementary Qualities, *and have taken a great deal too little notice of the Sa-*

line *and* Sulphureous *properties of things.* And that is the reaſon (I ſay) why the old *Scholaſtick Learning* is not ſufficient to furniſh us with any tolerable account, touching the Nature of Diſeaſes, and the curing of them: But he who is able, being inſtructed by *Chymiſtry*, to reaſon out things according to the real Appearances made in the Operations of Nature, and who to the conſideration of other ſubſtantial Notions joyns alſo this, *That all Fix't things may be made Volatile by the help of the Volatile Spirit alone, and that by the volatiliſation of what is Fix't, and a Fixation of what is Volatile*, many wonderful incredible Tinctures and Mutations of Humors and Liquors, may ariſe within, as well as without the Body of man, ſhall be able to apprehend the condition and cure of moſt of the Diſeaſes hitherto accounted incurable by *Galenical Phyſick.*

And truly tis great Pity, that none of the *Chymical Phyſicians* have yet taken the Task upon them, to write of the ſeveral Diſeaſes incident to the Body of man in ſuch a manner, as from Chapter to Chapter, to Philoſophiſe at large upon each Diſeaſe and the waies of Remedy, by the

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mediation of *Chymick Principles*, *Proceſſes*, *Alterations*, and *Productions*: For hitherto, the uſeful Notions of this kind that have been publiſhed, lie ſcatter'd in ſeveral Authors, and call aloud for a Collection by the hand of ſome learned Chymiſt, who may be able to improve them in Diſcourſe from his own knowledge and experience, and be ready to take in alſo the Counſel and Contributions of the ableſt Brethren of the Faculty, toward the accompliſhment of ſo needful a work. And if the Hints which I have here given, touching the influence or concurrence of *Venereous*, *Verminous*, and *Scorbutick Ferments*, in the Maladies of this Age, be of any value in mens eyes, I hope the admitting of them as *Hypotheſes* will be of uſe to others, as they have been to me, in the curation of Diſeaſes; for, the great Remedies that I relie on are ſo fitted to thoſe three, that be the Diſeaſe what it will, Acute or Chronick, they ſhall reach at it, and the *three*, *All in one*: And if at any time I have had ſucceſs more than ordinary in the curing of any, whether Infants or others, I aſcribe it (next the bleſſing of God) to the putting of this Notion in

practiſe; and the effects following thereupon have in time aſſured me, that I am in the right, therefore cannot but recommend it to others, that they may (if they pleaſe) *ex propriâ Minervâ* form unto themſelves ſuch Medicins and Methods, as may anſwer the Deſigne of this Diſcourſe.

Oſwald Grembs, lib. 1. cap. 1. De Cordis affectibus.

Si Galenicorum *Remedia Secundam, & Tertiam Digeſtionem non attingant, multò minùs Quartam, & Quintam.*

THE END.